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Soap



PLEASING ODORS

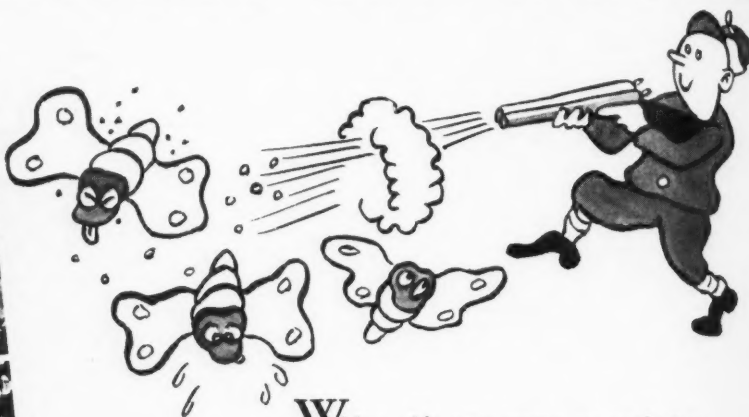
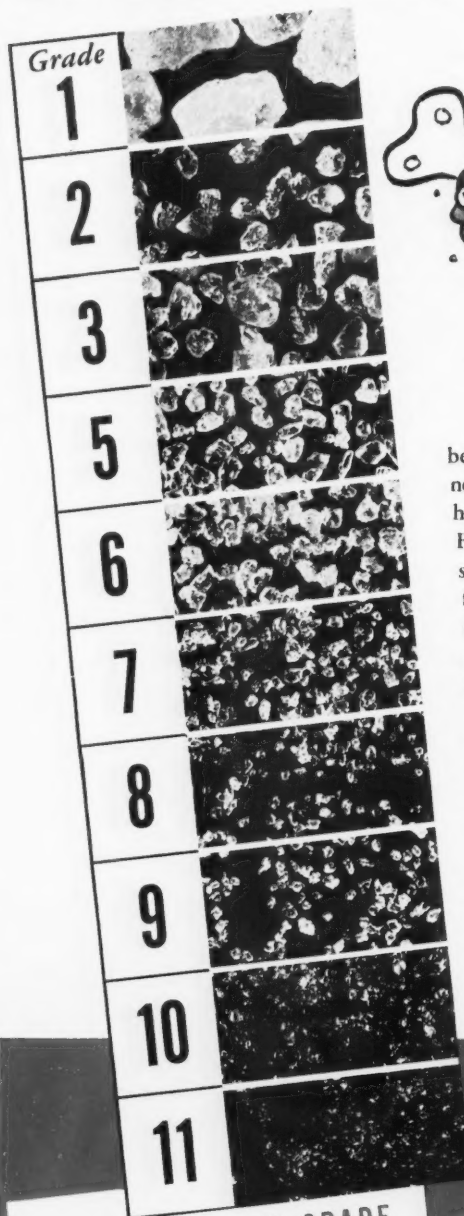
RETAIN WHAT YOUR
SELLING EFFORTS GAIN

Let Givaudan recommend a pre-tested selection of smart and appealing soap perfumes. They will please both your regular and hard-earned new users.

G I V A U D A N
D E L A W A N N A , I N C .
80 FIFTH AVENUE, NEW YORK, N. Y.

and Sanitary Chemicals

OPEN SEASON ON MOTHS



With a wide open season on moths just beginning, you don't have to waste a single sales shot this year . . . not with these **TEN GRADES** of Solvay Para-dichlorobenzene to help you run up your sales score.

From these **TEN GRADES** of Solvay Para-dichlorobenzene you can select a grade size that is exactly suited to *your own requirements* for transparent packaging . . . the *exact* size for avoiding wastage in manufacturing blocks . . . or the *exact* size for any other use you may have in mind.

Solvay Para-dichlorobenzene is also widely noted throughout the trade for its uniform crystal size—and the clearness of its crystals. Besides these factors **YOU HAVE THE ADVANTAGE OF SOLVAY SERVICE** . . . both Technical Service and the efficient routine handling of your orders. Fill in the coupon now for prices and a sample of the grade size you are interested in.

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 RECTOR STREET

NEW YORK, N. Y.

BRANCH SALES OFFICES:

Boston	Chicago	Cleveland	New Orleans	Philadelphia	St. Louis
Charlotte	Cincinnati	Detroit	New York	Pittsburgh	Syracuse

**YOU CHECK THE GRADE
... WE'LL DO THE REST**

We will send you a sample of the grade you check off . . . send you complete information on Solvay Para-dichlorobenzene . . . or if you are uncertain of benzene . . . or if you are uncertain of your requirements, our technical staff is ready to help you select the most efficient grades for your particular purposes. Make use of Solvay service!

Fill in the coupon now!

SOLVAY

TRADE MARK REG. U. S. PAT. OFF.

PARA-DICHLOROBENZENE

1	2	3	5	6	7	8	9	10	11
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Solvay Sales Corporation, 40 Rector Street, New York, N. Y.

Gentlemen: Please send me a sample of the grade of Solvay Para-dichlorobenzene I have checked off, along with complete information.

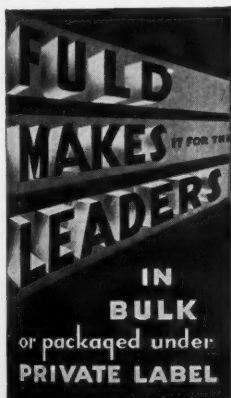
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"Upped"
When His

His Sales
Company

Changed To **FULD'S** **DISINFECTANTS**



His maintenance sales story hangs on germ control. And with Fuld-made disinfectants to back him up, he doesn't have to pull a punch. He's proved to himself that *similar* disinfectants are *not the same*—not by hundreds of orders. The best salesmen always sell what *they're* sold on.

Manufactured under scientific control which assures purity and uniformity. Every specialized Fuld Disinfectant takes a rigid germ-killing test so you may guarantee their strength to your customers with complete assurance.

*Selling
..Jobbers
ONLY!*

DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
INSECTICIDES
DISINFECTANTS
SELF POLISHING WAXES
PASTE WAXES

POWDERED WAXES
FLOOR SEALS
FLOOR TREATMENTS
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FURNITURE POLISHES
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SOAP DISPENSERS
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*Of Vital Interest
to Soap
Manufacturers*

COLUMBIA

LIQUID CAUSTIC SODA NOW TRAVELS DE LUXE



NOW! Liquid Caustic Soda Transported Without Crystallization or Metal Pick-Up

Good news to manufacturers of soap and allied products is the announcement that COLUMBIA research and engineering in collaboration with the manufacturer, have developed a specially insulated and specially lined tank car for the delivery of COLUMBIA Liquid Caustic Soda. This new tank car transports the product to destination without metallic contamination and in liquid form, making the job of unloading quicker and easier.

Picture the convenience of unloading both 50% and 73% Liquid Caustic Soda without steaming, either in winter or summer. The special insulation does

this! Consider what it means to entirely eliminate pick-up of iron or other metals by the Caustic while en route. COLUMBIA No. 5 Caustic-Resistant Paint takes care of that! And there are other notable advantages of interest to users of Liquid Caustic.

A fleet of these improved COLUMBIA Tank Cars is now serving COLUMBIA customers in the soap and allied industries with complete satisfaction. We welcome consultation regarding this latest COLUMBIA Service and how it may be advantageously applied to your operations.



CAUSTIC SODA—50% and 73% Liquid, in 8,000 and 10,000 gallon Tank Cars.
Also, Solid, Flake, Ground and Powdered.

Other Products

SODA ASH

SODIUM BICARBONATE

LIQUID CHLORINE

CALCIUM CHLORIDE

THE COLUMBIA ALKALI CORPORATION

Executive Sales Offices: 30 Rockefeller Plaza, New York, N. Y.
Plant: Barberton, Ohio

Chicago

Boston

St. Louis

Pittsburgh

Cincinnati

Cleveland

Minneapolis

Philadelphia

Soap

Volume XVI
Number 4

and Sanitary Chemicals

Reg. U. S. Pat. Office

APRIL
1940

SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 73.



Contents

• Editorials	21
• Pyrophosphates	23
By Fred C. Bowman	
• Oil and Fat Refining (Part II).....	27
By Harold Silman	
• Cleaners for Rugs, Carpets, Upholstery.....	30
By Paul I. Smith	
• Soap Definitions Revised.....	59
• Uses of Tallol Soaps.....	61
• Comments on Dry Mixing.....	92
By Ralph H. Auch	
• Automobile Polishes.....	94
By Dr. C. A. Tyler	
• Insect Powder Labels.....	97
• Sanitary Supply Selling—Trade Comments.....	103
• Termite Control.....	109
• Contracts Awarded	47
• New Trademarks	49
• Raw Material Markets.....	53
• Raw Material Prices.....	55
• Products and Processes.....	67
• New Equipment	69
• New Patents	71
• Classified Advertising	135
• Advertisers' Index	140









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The Touching Fable of the Best Hand Soap in the World . . . And Why It Flopped

ONCE UPON A TIME THERE WAS A MAN WHO INVENTED
 A FORMULA  FOR THE BEST HAND SOAP IN THE WORLD. HE
 GOT SOME BACKING  BUILT A PLANT AND STARTED INTO
 PRODUCTION. HIS SALESMEN LOADED UP THE DEALERS  BECAUSE
 THE PRODUCT WAS SO FINE. BUT REPEAT SALES JUST DIDN'T COME
 IN, AND FINALLY THEY HAD TO CLOSE SHOP  . . . THE
 TROUBLE WAS THAT THE PACKAGE SCREAMED "BASEMENT" 
 AND SO THAT'S WHERE EVERY LAST ONE OF THEM LANDED
 . NOBODY EVER THOUGHT OF BRINGING THIS SOAP UP INTO
 A BRIGHT AND DAINTY KITCHEN  OR INTO A SCRUBBED AND
 POLISHED BATHROOM  WHERE IT WOULD BE READILY AVAILABLE.
 BUT—IF THE INVENTOR HAD CONSULTED ANCHOR HOCKING, HE MIGHT HAVE

FARED BETTER



HERE EXPERTS IN PACKAGE DESIGN WOULD

ADVISE HIM WHAT SORT OF A BRIGHT, CHEERFUL, CONVENIENT GLASS

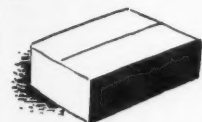
PACKAGE TO USE



AND WHAT SORT OF A CLOSURE



TO PUT ON IT TO MAKE IT PRACTICAL. HOW TO PACK AND CARTON



IT. AND FINALLY, HOW TO MERCHANDISE



THIS

PACKAGE. THEN, BEING A HANDSOME AS WELL AS A USEFUL PACKAGE



, FOLKS WOULD HAVE KEPT IT OUT WHERE IT COULD BE SEEN

AND USED



SALES WOULD HAVE COME IN MULTIPLE UNITS

AND REPEATS WOULD HAVE FOLLOWED NATURALLY.

Moral: IF YOU ARE A MANUFACTURER OF HAND SOAP, AND WANT

TO STEP UP YOUR SALES AND PROFITS, ASK



US TO SEND YOU

AN EXPERT IN THAT FIELD. HE WILL GIVE YOU SOUND PACKAGING

RECOMMENDATIONS



THAT WILL AID MATERIALLY IN BUILDING SALES.

ONLY ANCHOR HOCKING PROVIDES COMPLETE PACKAGING SERVICE...

CONTAINERS





CLOSURES



CAPPING MACHINES



ANCHOR HOCKING GLASS CORPORATION, LANCASTER, OHIO.

The  is QUICKER
than the 



There's more than just an illusion of speed about the way our products work and we've "greased" our deliveries so that you'd think we were magicians.

But don't forget that "hands" enter this picture too . . . skilled hands that know how to test our products for purity, constancy and ability so that you are certain to be completely satisfied no matter what Ampion Product you want.

Don't expect us to whip any rabbits out of top hats but you can rely on getting the finest in chemical products at prices that will appeal to you.

PRODUCTS

Liquid Soap

Dispensers

**Liquid Soaps and
Bases**

**Oils, Soaps and
Liquids**

Disinfectants

Insecticides

Waxes and Polishes

Deodorizing Blocks

Containers

And Allied Products

AMPION CORPORATION
4-88 FORTY SEVENTH AVE.
LONG ISLAND CITY, N. Y.

use COLOROMES for

PERFUMING AND COLORING NAPHTHALENE AND PARADICHLOR- BENZENE CRYSTALS AND BLOCKS IN ONE EASY OPERATION

With Felton Coloromes, you can be certain to produce deodorant blocks and crystals with *lasting fragrance and color!* Your product will continue to please the nose until the final crystal has evaporated. Try Coloromes without further delay. They're economical in cost . . . and simple to use. Only one easy operation imparts both color and fragrance.

COLOROMES Series "125"

1 lb. containers	. . . . .	\$1.25 per lb.
5 lb. containers	. . . . .	1.10 per lb.
25 lb. containers	. . . . .	.95 per lb.

MANY POPULAR ODORS AVAILABLE, INCLUDING:

ROSE	JASMIN	LILY	ORIENTAL	LAVENDER	PINE NEEDLES
LILAC	BOUQUET	VIOLET	NARCISSUS	CEDARPINE	NEW MOWN HAY

THE ABOVE ODORS CAN BE SUPPLIED IN ANY OF THESE COLORS —

Amber - Green - Pink - Yellow - Blue - Purple - Red - Violet

COLOROMES CAN ALSO BE SUPPLIED WITHOUT COLOR

WRITE FOR
SAMPLES
TODAY!



FELTON
CHEMICAL COMPANY, INC.

603 Johnson Ave., Brooklyn, N. Y.

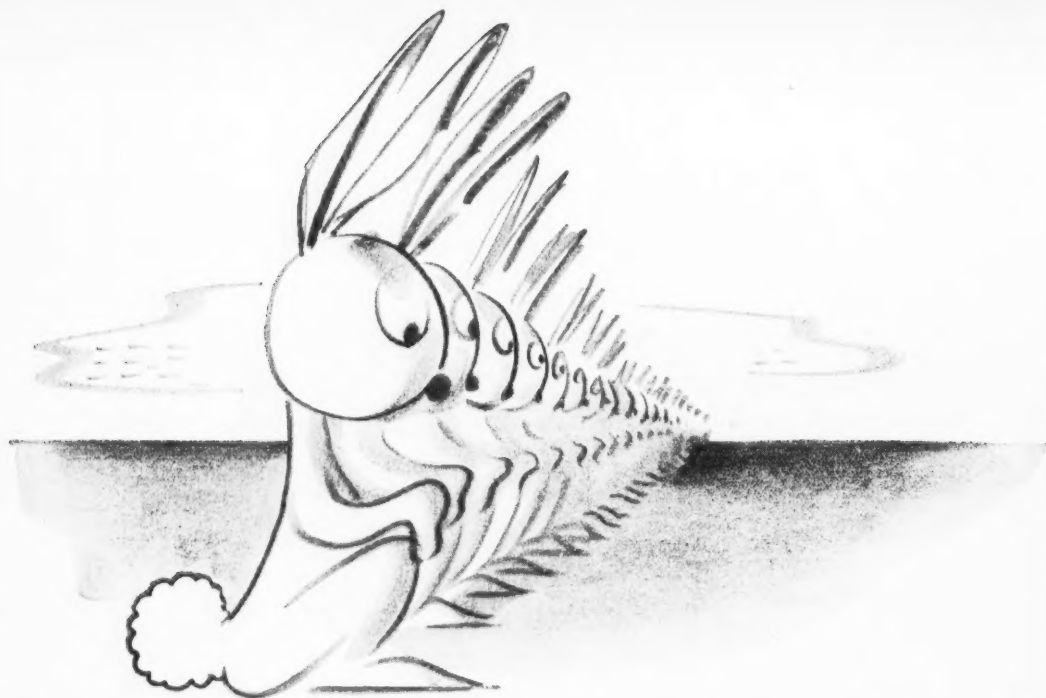
STOCKS IN
PRINCIPAL
CITIES

Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES,
PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

April, 1940

Say you saw it in SOAP!

9



Perhaps You Didn't Know About Them All

Nearly everyone in the chemical industry seems to know that the Warner Division of Westvaco Chlorine Products Corporation pioneered the production of phosphates in the United States—that Westvaco itself is a principal producer of caustic soda, chlorine and related products—that a newer phase of our business is the production of Magnesium Oxide from sea-water bittorn by our subsidiary, the California Chemical Company.

But many other Westvaco products are perhaps not so well known. So for our good friends who occasionally tell us: "I didn't know Westvaco made *that*", we list our principal products and invite inquiries for quotations, samples and technical data.

Tetra Sodium Pyrophosphate	Barium Carbonate	Sodium Phosphates
Acid Sodium Pyrophosphate	Barium Hydrate	Chlorine, Liquid
Alumina Hydrate, Light	Barium Oxide	Sulphur Chloride
Adsorptive Granular Magnesia	Barium Peroxide	Carbon Tetrachloride
Adsorptive Powdered Magnesia	Caustic Soda	Trichlorethylene
Chloride-free Magnesia	Caustic Potash	Carbon Bisulfide
Plastic and "Quick" Magnesia	Epsom Salt	Sodium Sulfide
Chemical Grade Magnesia	Hydrogen Peroxide	Sea-water Periclase
Phosphoric Acid	Bromine	Blanc Fixe

WARNER

CHEMICAL COMPANY ☆ DIVISION OF

WESTVACO CHLORINE PRODUCTS CORPORATION

CHRYSLER BUILDING, NEW YORK, N. Y.

"SOF"

NON-CAUSTIC GREASE AND OIL REMOVER

Concentrated compound produced to remove accumulated oil and greasy dirt from concrete surfaces. It mixes perfectly with kerosene to form a powerful, yet non-caustic solution that quickly dissolves and emulsifies grease.

A CLEAN MOTOR RUNS COOLER!

Flush or spray the motor block with a solution of 1 part of "SOF" to 6 parts of kerosene. Almost see the grease liquifying. Flush off with water.

FOR DE-GREASING CHASSIS AND WHEELS

Running gear may be quickly cleaned by the same method and with the same mix. Spray or paint on the solution and flush off the grease with water. Running gear and wheels will help the appearance and saleability of your equipment.

CLEAN AND DE-GREASE PARTS

Parts can be cleaned in one tank. In one tank put a solution of 1 part of "SOF" and 4 to 6 parts of kerosene. Dip the parts to be cleaned in the solution. Wash with a brush if necessary to remove accumulated grease. Flush with water to rinse them off. If hot water is used, parts will dry faster.

FLOORS LOOK BETTER

Oil and grease stains quickly removed with "SOF". Mix 1 part of "SOF" with 4 to 6 parts of kerosene. Pour some of this solution on the floor. Scrub with a stiff brush. Squeegee the solution onto the next section. Repeat the cleaning with "SOF"-KEROSENE solution and repeat the cleaning.

WHEELS, TOO

Oil and greasy dirt are easily cleaned by spraying with "SOF" solution, followed by an immediate rinsing with clear water.

REMOVES OIL AND GREASE FROM ANY SURFACE EASILY AND ECONOMICALLY

Use in 5-gal. drums, half-drums, or quarter-drums equipped with a faucet, and in 5-gal. cans with pouring spouts.

THESE CATALOG PAGES AND CIRCULARS NOW
READY FREE. SEND COUPON FOR SAMPLE AND
PRICES OF "SOF".

**THE DAVIES-YOUNG
SOAP COMPANY
DAYTON • OHIO**

THE DAVIES-YOUNG SOAP CO., Dayton, Ohio

Please send us free sample of "SOF" and prices in 55-, 30-, 15-, 10-, and 5-gal. drums; and 1-gal. cans.

Name

Address

City and State



Consumers welcome Aromatic's new triumph
—SAVONEX—the product that takes the
place of Sassafras and costs half the price.

SAVONEX

A NEW LOW PRICED ODORANT THAT OFFERS THE FOLLOWING ADVANTAGES:

1. Water White.
2. Twice the odor value of such products as Sassafras Artificial or Camphor Sassafrassy.
3. One-half the present price of Sassafras Artificial.
4. Maintains its odor in soap longer and more pleasantly.
5. It can be purchased on a large scale here in America and your supply guaranteed.

Order a trial pound!

Aromatic Products, Inc.

15 East 30th Street, New York City

Factory: Springdale, Conn.

ATLANTA
223 Spring St., S.W.

DALLAS, TEXAS
5207 Monticello Ave.

MEMPHIS, TENN.
364 So. Front St.
Room 108, Brokers Bldg.

PITTSBURGH
727 Grant Building

CHICAGO
205 West Wacker Drive

COSMETICS



*Give glamour to the face
Plead favor through the eye*

OWENS-ILLINOIS
Complete Packaging Service
GLASS CONTAINERS—CLOSURES—SHIPPING CARTONS

...and win confidence in their claims through artful packaging. "To paint the lily"—to clothe merit in the garments of glamour through the medium of glass, is our acknowledged accomplishment. Owens-Illinois Glass Company, Toledo

ODOR IS IMPORTANT!



*People travel to
pine-scented air
...and send balsam
pillows back to
their friends...*

The refreshing scent of Pine Forests has always held an appeal to the public.

A Pine Soap or Bath Preparation so perfumed recalls vacation days. They give a sensation of cleanliness and health.

For exquisite Pine Odors for Soaps, Pine Baths and Cosmetics, the following are ideal bases:

ISO BORNYL ACETATE
PINE BOUQUET No. 1188
PINE BALSAM No. 2728

AROMATICS DIVISION

GENERAL DRUG COMPANY

170 Varick Street, New York, N. Y.
Transportation Bldg., Los Angeles, Cal.

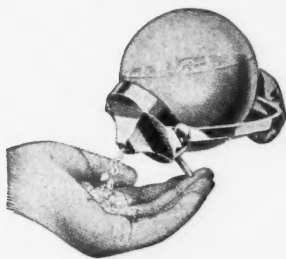
9 South Clinton St., Chicago, Ill.
907 Elliott St. West, Windsor, Ontario

Sanitary Supplies

by CLIFTON



The Duodek Soaper



The Tilttype Soap Dispenser

featuring

- ★ QUALITY
- ★ PRICE
- ★ SERVICE

LIQUID SOAPS and BASES

FOAMWEL LIQUID SOAP—Foamwel gives a quick, profuse lather in both hard or soft water. It rinses off quickly leaving hands soft and smooth. Made from pure coconut oil and aged in cypress tanks. For these reasons Foamwel is superior to ordinary liquid soap.

CLIFTON LIQUID SOAP CONCENTRATE—A concentrated product used for the manufacture of liquid soap by merely adding 2 to 3 times as much plain hydrant water. Clifton Liquid Soap Concentrate is made from the same high grade materials as Foamwel but more concentrated.

CLIFTON LIQUID SOAP BASE—Solid form. A sparkling clear concentrated base made from the same basic materials as above. Recommended for those who have facilities to use the solid material. Break up in small pieces and dissolve in 2 or 3 times as much water. Add perfume and coloring if desired.

SEMI-CASTILE LIQUID SOAP—Made from half olive oil and half coconut oil. Used where an extra bland and unguent soap is required. Recommended for delicate hands.

OLIVE OIL SYRUP—A concentrated product to which water may be added before filling dispensers. Contains a percentage of coconut oil to enhance lather. Used in hospitals for extra emollience.

POLISHES, ETC.

RUB-NO LIQUID WAX—For floors. Dries bright without polishing. Does a better job than old style waxes and saves considerable labor.

PREPARED LIQUID WAX—Requires polishing. For floors, furniture, woodwork, autos. Apply with cloth and allow to dry for a few minutes. Polish with soft rag to bring out rich lustre.

DAZZLE METAL POLISH—A liquid polish for all metals. It is non-inflammable and non-setting. A lazy man's polish—maximum lustre with least effort.

GRADE "A" FURNITURE CREAM—Imparts delightful lustre to furniture and woodwork. Leaves a hard, glossy, dust-resisting surface.

LUSTRA BAR OIL—Keeps bars and woodwork clean and shiny and water-resistant. Lustra is the bartender's friend.

MOP-IN-VAR—A high grade mopping varnish made from synthetic P. C. Indene resins. Apply to all types of floors with the exception of rubber or asphalt. Reduces maintenance costs.

DISINFECTANTS, Etc.

PINE TREE DISINFECTANT—Gives a snow-white emulsion when added to water and is preferred by some because of the pleasant aromatic piney aroma that it imparts. Its great advantage is its efficiency coupled with its aromatic odor. The color is a light straw and it is unusually clear and transparent. Most people prefer this sparkling light colored pine disinfectant.

CRESOLENE DISINFECTANT—A coal tar disinfectant made from extra selected grade of distilled tar acids. Cresolene has a refreshing carbolic odor and gives a milk-white emulsion in either soft or hard water. Cresolene is not to be compared with the usual run of coal tar disinfectants that are made to meet a price. Coefficient 2.

HIGH COEFFICIENT DISINFECTANT—Has a coefficient of 16 and is made from genuine Scotch-blast furnace tar acids of which we are direct importers. Used extensively to fortify the lower grades of disinfectant. Economical.

INSECTICIDES, ETC.

INSECTOL—Kills flies, moths, mosquitoes, roaches, fleas, bed bugs, and other insects. Very powerful and efficient. Extremely economical, as a small amount is needed. Has a pleasing odor.

MOTH-BLITE FROST—Kills moths, eggs, larvae. Use in a hand sprayer on woolens, clothes, furs, rugs, etc. Deposits a white frost which slowly disappears. Stainless and non-explosive.

MIST-O-CIDE—To be used in electric automatic insector. An odorless, highly concentrated extract which has high killing power.

INSECTOR—A Vaporizing Machine—For use with Mist-O-Cide. Operates on any light socket. Current shuts off automatically. Fool-proof, economical, efficient.

VEGETABLE OIL CLEANSERS, ETC.

PINE-GLOSS CLEANSER—For glossy surfaces. A new principal bland neutral syrup-like cleanser to be used about one or two cups to a pail of water. Leaves a bright finish on varnished woodwork, furniture and automobiles. Cleans with a minimum of effort.

SHINE-BRITE—Of the same general characteristics as Pine-Gloss Cleanser except that it has a mild perfume odor in place of the pine smell. The modern way to clean and preserve floorings is by the use of Shine-Brite.

METEOR OIL SOAP—A light amber neutral potash vegetable oil soap recommended wherever a bland soft soap is desirable—in general on all glossy surfaces. Contains 45% anhydrous content.

HOSPITAL GREEN SOAP—some general style as Meteor but designed for hospital use.

DAZZLE SILVER POLISH (Mineral Paste)—A white mineral polishing cream which imparts a high lustre on silver, plated ware, gold, chromium, glassware. A very fine mesh mineral is used to prevent scratching.

DEODORIZING BLOCKS

SENTINELS—Deodorizing Cakes De Luxe.

DEODORETTES—Popular priced cakes packed in tubes.

PACKING

PACKING—To meet your requirements, from 55 gal. drums down to 1 gal. cans for liquids. Liquid soap base, oil soap, etc. put up in 450-lb. bbls., 250 lb. ½ bbls., 140 lb. kegs, 65 lb. tubs.

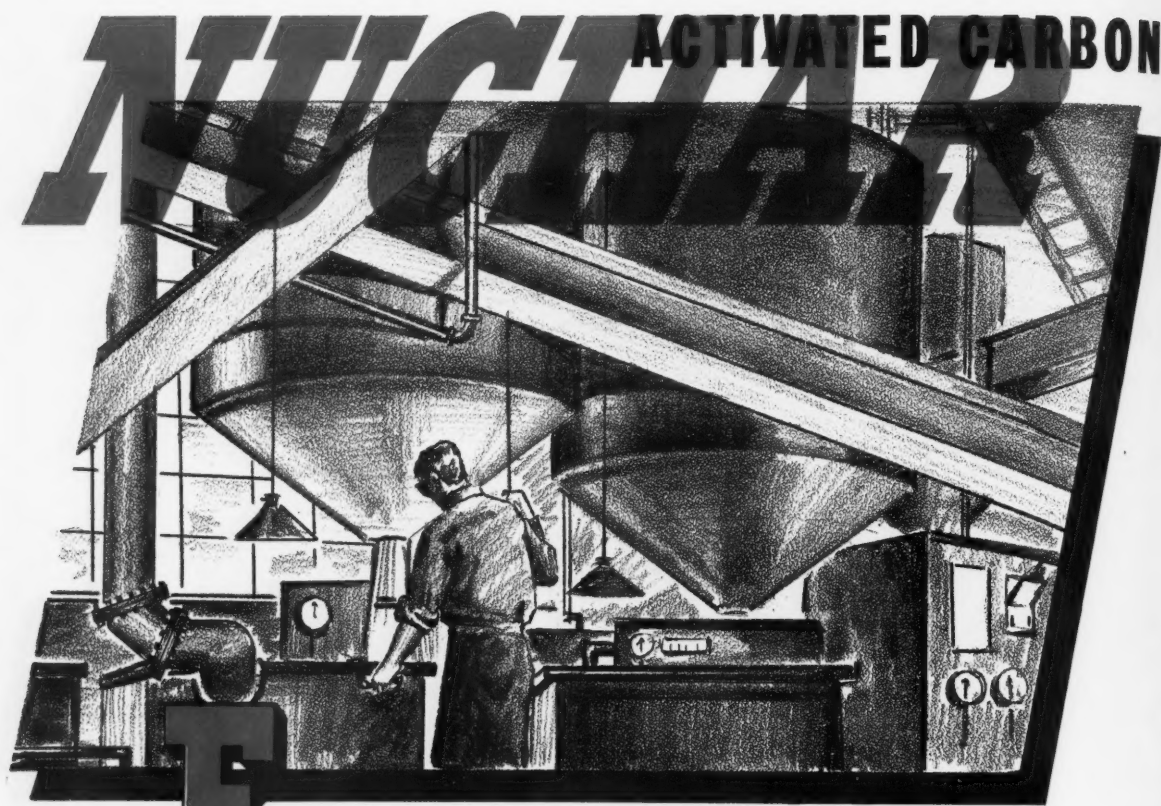
ATTRACTIVE IMPRINT LABELS—and forceful sales-producing circulars are part of Clifton service you are entitled to.

EXACTNESS—Every product described will do exactly what it is intended to do efficiently and economically. No bombastic or impossible claims are made and no Clifton representative is knowingly permitted to make such claims.

CLIFTON CHEMICAL CO., INC.

244 FRONT STREET
NEW YORK, N. Y.

ACTIVATED CARBON



FOR PURIFICATION IN EVERY PHASE OF THE OIL AND FAT INDUSTRY

The many different factors entering into the processing of an oil before it comes to the bleaching operation, makes it almost impossible to lay down anything like an absolute set of data for treating any one particular oil.

The fats and oils to be treated may be divided into two classes.

First: Those upon which Activated Carbon alone is a sufficient decolorant, i.e., Pure Lard, Coconut Oil, Palm Kernel Oil, Cod Liver Oil, etc. The mere addition of a small percentage of NUCHAR suffices on these oils.

Second: In the case of those oils or fats—characteristically dark in color—which are spoken of as possessing an excess of reds, yellows and sometimes greens, etc.,



it is advisable to use Bleaching Clay in conjunction with NUCHAR to obtain the desired degree of decolorization. Bear in mind that there is no competition between Bleaching Clay and Activated Carbon. Bleaching Clay removes the yellows and greens and moderately the reds. Where the Bleaching Clay action ceases, the action of Activated Carbon takes hold, accomplishing remarkable removal of colors not affected by the Bleaching Clay. The action of NUCHAR and of Bleaching Clay thus become supplementary to each other in the case of decolorizing these darker oils and fats; for example, Cottonseed Oil, Corn Oil, Soya Bean Oil, Linseed Oil, Tallow, Greases, Dark Marine Oils, etc.

INDUSTRIAL CHEMICAL SALES

DIVISION WEST VIRGINIA PULP AND PAPER COMPANY

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1322 Widener Bldg.

CLEVELAND
417 Schofield Bldg.

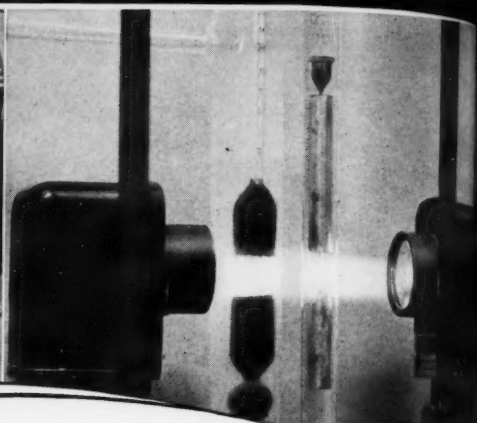
A NEW PACKAGE?

In the merchandising of new soaps or cosmetics, outstanding, eye-catching, distinctive packages are vitally important. The perfume in your product is just as important. Seek the advice of packaging experts in your package design and seek the advice of perfume experts in selecting its odor. We have been creating successful soap perfumes for so long that we feel justified in calling ourselves experts in this important field.

VAN AMERINGEN-HAEBLER, INC.
315 FOURTH AVENUE, NEW YORK CITY

pH RECORDER

First step in the making of TSPP of uniform high quality is the correct proportioning of raw materials. To achieve this objective a continuous, automatic pH recorder (the first of its kind) and an electric eye cut-off are employed. What formerly required many hours of laborious checking is now simply and automatically controlled.



CONVERTER

In this huge converter, heat is applied to tons of orthophosphate . . . changing it into "pyro."



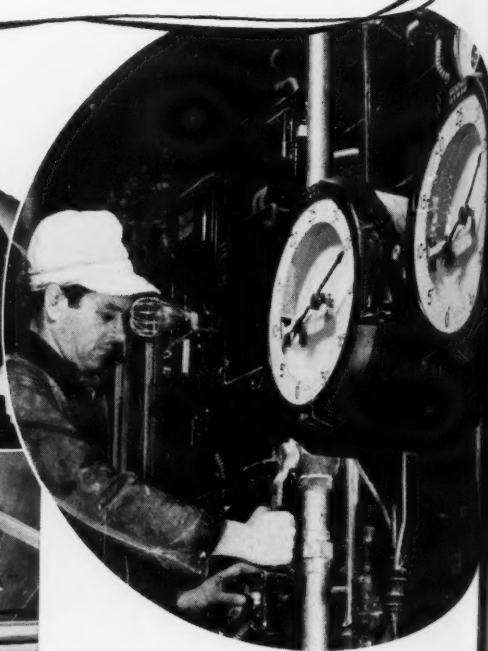
SEND FOR BOOKLET ON TETRA PYRO- PHOSPHATES

Because of the improved manufacturing technique briefly illustrated here, Victor Tetra Sodium Pyrophosphate is an outstanding product. It excels in purity, physical condition, color, and pyrophosphate content. Large scale production assures a dependable, practically unlimited source of supply. Send for experimental sample.

VICTOR CHEMICAL WORKS
141 W. JACKSON BLVD., CHICAGO

VICTOR HEADQUARTERS FOR phosphates

THE *Inside Story*
OF VICTOR TETRA SODIUM PYRO PHOSPHATE



CONVERTER CONTROL

Here again accurate control is essential to the production of a product of uniform quality. This picture of the control panel shows that nothing is left to chance in the operation of Victor's "Pyro" Converter.

IN THE BAG

Victor Tetra Sodium Pyrophosphate . . . the superior product of an improved manufacturing technique. A soap builder possessing many unique characteristics, Victor TSPP is preferred by leading soap makers.



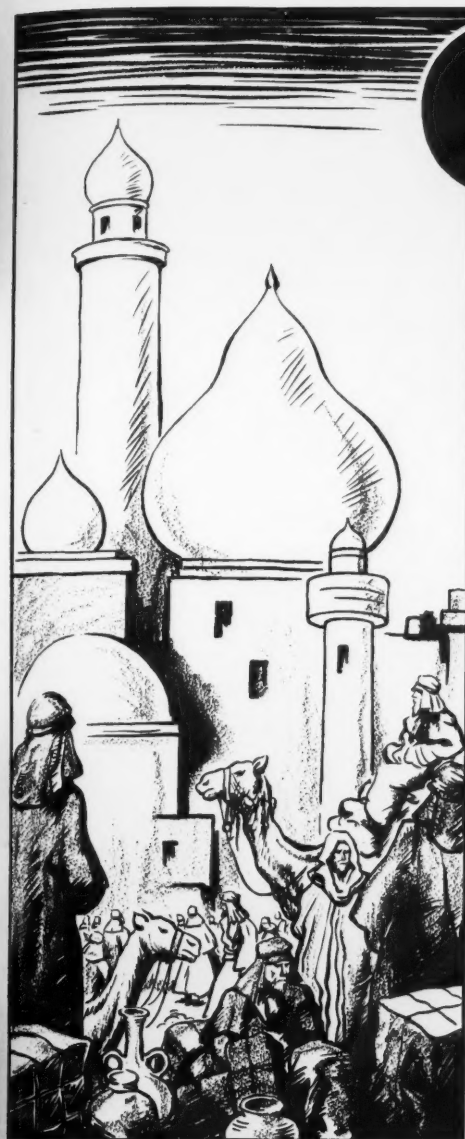
GUM

KARAYA

TRAGACANTH

ARABIC

LOCUST



ORBIS GUMS, whole or powdered, are the products of expert experience of forty-two years standing in the selection of fine raw materials and in milling to guarantee complete satisfaction for your most exacting technical requirements.

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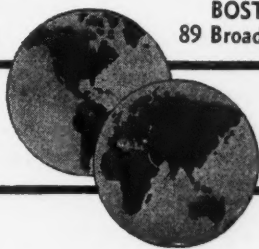
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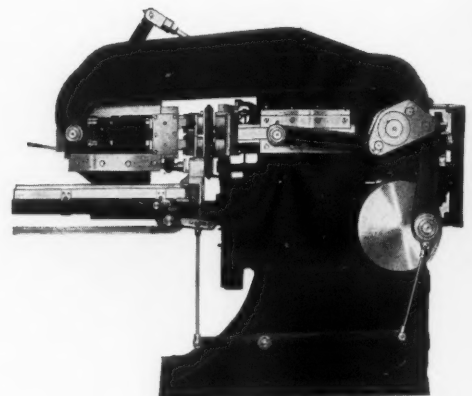
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As the Editor sees it..

CONSUMPTION of fats and oils by soapers in 1939 showed a seven per cent increase over 1938. According to figures of the Bureau of the Census, the soap industry last year used over 1,800,000,000 pounds of fats and oils out of a total factory consumption of 4,800,000,000 pounds. This approximates thirty-eight per cent for the soap kettle which is about the same average proportion of the past ten years, but higher than the past few years during which fat consumption in other industries, principally plants making food-stuffs, had taken a greater part of the total. In 1939, the share of fats taken by the soap industry was up from a figure of thirty-four per cent in 1935 and 1936.

If all of the fats and oils taken by the soap industry in 1939 actually went into consumption, it marks what is perhaps the largest annual production of soap in the history of the country. Considering all of the products generally classed as soaps, from soap powders up to toilet soaps, this probably indicates a production approximating three-and-a-half billion pounds. This figure rises to confound those who have during the past five years predicted that soap production had reached its peak and must decline owing to changing conditions and the inroads of other detergents.

But in spite of the steady growth in the consumption of competing detergents, widespread water-softening operations, and more scientific and economical usage, the production of soap seems to keep on growing. Maybe we are taking too much of a short-term view of the situation. Possibly twenty or thirty years from now, soap will have been relegated to the horse-and-buggy class by the advance of the newer detergents. But certainly, one would never suspect such from the happenings of the past five years, especially those of 1939.

WHEN we see men working with hot alkali solutions and not wearing gloves or goggles, it always gives us goose-flesh up the spine. Among old-timers who continue to scoff at safety regulations, this problem is probably the most difficult for the employer. It is always more difficult to make an old hand conform than a young one. But hot caustic solution is no respecter of age or person, and the problem of the stubborn old man is just as much the employer's problem as that of the green young workman. Goggles belong over the eyes,—not on the forehead, although there are plenty of "wise guys" in soap plants who apparently do not think so. And it's a smart manufacturer who appreciates this and enforces safety regulations in his plant.



ACCORDING to another report out of Washington,—and let it be said here that reports out of that city are numerous these days,—the Food & Drug Administration is now supposed to take the attitude that the insertion of the word, "soap," in the name of a shampoo or shave cream will not exempt it under Section 201 of the Food, Drug & Cosmetic Act. In short, the Food & Drug Administration is supposed to have changed its mind, having heretofore taken the stand, according to "confidential advices" to this one and that one, that if the word, "soap," formed part of the product name, such as "coco-nut oil soap shampoo," it was not considered a cosmetic.

As we have noted before, it is going to take a court decision or two really to clear the atmosphere in this shampoo controversy. No matter

what Washington says or does, or what manufacturers believe, uncertainty will exist until the courts tell everybody just where they stand. Under the circumstances, it seems to us that manufacturers might as well be shot for stealing a whole sheep, if they are to be shot at all. A well-known legal authority stated not so long ago that any soap product, whether it bears the name, soap, or not, and which is in fact a soap, must by specific mandate of the law be exempted from the definition of "cosmetic." He states that the Food & Drug Administration has no jurisdiction in classifying any soap product as anything but a soap, and that accordingly no soap shampoo or shave soap can be brought under the law.

Possibly, by dint of circumstances, this is the attitude which manufacturers should assume until such time as the courts may sustain their contention or decide otherwise.



COMPLAINTS from soap manufacturers against the recommendations on small cans of lye for homemade soap manufacture, have not been uncommon. The semi-saponified concoctions which come from following directions on some of these lye cans in making soap from kitchen grease most certainly justify the charge that they have no right to be termed "soap." As a whole, these lye can recipes are incorrect and misleading, and with this in mind, we suggested some months ago to an angered soaper that maybe this was a matter for Federal Trade Commission attention.

And now we note that a packer and distributor of lye in small cans has been cited by the F. T. C. for misrepresentation. The label in question represented that the contents of a six ounce can of lye would make a hard soap when "mixed" with six pounds of grease. The Commission concludes that "such is not a fact," which is putting it mildly indeed. Actually, about twice as much lye at least would be required to saponify this amount of fat, and even if this larger quantity of alkali were used, heaven

alone could tell in advance what the resultant "soap" might be like. That it would not in any way equal a standard commercial laundry soap, according to the common tests, is quite obvious.

Soap manufacture is a process requiring skill and experience. The sooner packers of lye in small cans appreciate this and quit kidding a certain small percentage of the public into making its own soap, the sooner will more potential tangles with the F. T. C. be avoided.



IN the heat of competition, salesmen are prone to claim virtues and properties for their goods which too often are not in strict accordance with the facts. Frequently, a manufacturer will damn his competitor for making extravagant claims which actually have never been made by the house, but are in fact, the result of too great an enthusiasm or deliberate misrepresentation by a salesman. And the sad part of this is that such practice is very common. In some instances, it is done so regularly that the executives of the firms must be aware of what is going on.

After all, misrepresentation by word of mouth is the safest kind of chiseling. In fact, and as is often the case, the salesman may be the innocent dupe of his employer. He is told that the product is a forty per cent soap and he offers it as such. On the other hand, he may know that it is only thirty per cent, but to get the order in question and to give what appears to be a better price, he claims forty per cent. And this verbal misrepresentation, deliberate or otherwise, goes on and on. It is widespread in the sale of a hundred and one items in the janitor supply line.

How to stop it? Let those manufacturers who hew to the line in their sales claims take off their kid gloves and tell buyers what is going on,—tell them bluntly that unless they watch and test what they buy, there is every chance that they will be cheated. Tell it to buyers in a real rough, tough fashion, and keep telling them. Plain business honesty does not have to wear kid gloves.

PYROPHOSPHATE . . .

A discussion of what Pyro does in washing dishes and clothes, and comments on patents concerning it

By Fred C. Bowman

A. R. Maas Chemical Co.

PYRO, more formally tetrasodium pyrophosphate, is not a new chemical, for it was discovered in 1828. Yet it has remained in quiet industrial obscurity until only two or three years ago. Then it sprang abruptly into prominence with nobody knowing exactly who did it. No new patents, no publicity, no hurrahs, even very little consumer demand were noted. Yet in that brief time the amount of P_2O_5 going into pyro has become quite 50 per cent more than into our good old standby, TSP.

The water in all three beakers had a hardness of 100 parts per million and was moderately hot. The beaker on left was treated with 0.15 per cent trisodium phosphate and 0.15 per cent pyro; the water was not clouded at all by the TSP but remained clear. The beaker on the right received .05 per cent soap but no pyro; it was impossible to make it lather and there was a heavy sticky curd of lime soap. The middle beaker received the same amount of soap but also .3 per cent pyro; it lathered easily and strongly on agitation and rinsed freely.

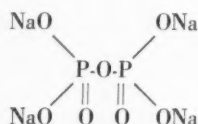
Even the name of the material causes bewilderment and dissatisfaction. To the chemist it is tetrasodium pyrophosphate, — nine syllables of mystery. There is no hope that the average lay consumer will ever learn to distinguish that from sodium tetraphosphate, which is quite another article. The name is often slightly shortened to sodium pyrophosphate, but that is still seven syllables and risks confusion with sodium acid pyrophosphate, a baking powder material. One manufacturer is pushing the nickname TSPP, which is apt to



be confused with TSP (trisodium phosphate). Another calls it phosphotex, which has nothing against it except that it is trade marked (U. S. 365,395 March 7, 1939) and so not available to others. A large user calls it "pyray," the legal status of which is not known. Most buyers and several of the chief manufacturers call it pyro, and simplicity and convenience should make that name prevail in the wholesale trade at least.

This article does not attempt to disclose new research, but collects for the convenience of those in the detergent business some of the widely scattered information which they could not easily find for themselves. It is confined to pyrophosphate and so does not include metaphosphate, tetraphosphate, triphosphate or the ortho-phosphates. Also it gives very little data on non-detergent uses.

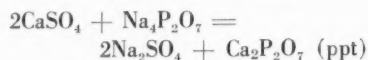
Chemically, pyro is expressed by the formula



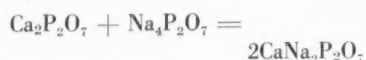
but that gives no hint of the qualities for which it is valued and is of slight present interest. In 1828, it was discovered that roasting disodium phosphate produced pyro and that is the way it is made still by all producers. It has one hydrate, $\text{Na}_4\text{P}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$. The transition temperature from hydrate to anhydrous lies between 171° and 174° F. according to different authorities. Both anhydrous and hydrated forms are on the market but the anhydrous outsells the crystal at least 20 to 1 because more economically priced. The solubility of the anhydrous is 4.96 per cent at 60° F. and 28.7 per cent at 212° F., with only a slight kink in the solubility curve at the transition point. The pH of a 1 per cent solution is 10.2, the same as for olive oil soap. The commercial products of all makers are of high purity, usually at least 97 per cent, the balance being other anhydrous soda phosphates.

The unique chemical property of pyro is its strange ability to form

soluble non-ionized salts when it is present in excess. Thus when a little is added to a solution of a calcium salt, a precipitate of the highly insoluble calcium pyrophosphate is formed:



but if more pyro is added the precipitate redissolves:



Similar formation of precipitates soluble in excess pyro occurs with magnesium, iron, aluminum, manganese, zinc, chromium, copper, nickel, barium, strontium, uranium, etc., but lead, mercury and silver precipitates do not redissolve. The mechanism of redissolving is conjectural and quite a large excess of pyro is required to produce it. Even among those that do redissolve there is great variation. Magnesium and zinc redissolve strongly, iron moderately and calcium only to a limited degree under suitable circumstances. Fortunately those circumstances are just what are found in ordinary washing. Redissolving of precipitates is favored by heating, occurs best in neutral solution and is definitely hindered by soaps or strong alkalis.

The tendency to redissolve precipitates of lime and magnesia is the foundation of pyro's use in washing dishes and bottles. Pyro solves a well known difficulty met in the use of modern mechanical dishwashing machines, where dishes are not towelled, but rinsed with hot water, and allowed to drain and then dry from their own heat. When ordinary water and any good cleanser such as TSP are used, a precipitate of lime and magnesia salts is formed and there is a tendency for some of it to stick to the china, glass or cutlery and to dry on. Thus repeated washings gradually build up a fog or film and the appearance of the glass is spoiled. Pyro added to the dishwashing mixture prevents fog formation, improves draining and gives sparkling clear dishes.

The quantity of pyro required depends of course on the hardness of the water used. Waters whose hard-

ness consists of magnesia rather than lime are easier to treat and require less pyro. A popular mixture is three parts TSP and one part Pyro, which gives a pH of 11.0 in 1 per cent solution. Another excellent mixture consists of equal parts of snowflake soda and pyro and has a pH of 8.65 in 1 per cent solution. Both were tested at 18° C.

In Dishwashing

IT MIGHT be supposed from discussion up to this point that the way to find how much pyro is required in washing dishes is to test how much must be added to keep the water clear and not precipitable by the other ingredients of the dishwashing compound, but such is not the case. Another valuable property of pyro that is not so easily measured, reduces the amount required. That is its remarkable ability to emulsify materials which it cannot dissolve. Figures showing considerable emulsification of large amounts of clay by only .006 per cent pyro in water have been published, though more was found better. Also it takes less pyro to prevent flocculation than to undo it. Hence the other ingredients, the quantity and kind of dirt to be removed, the temperature at which it will be used, etc. all effect calculations of what percent to compound in a mixture.

One naturally wonders "Why mix anything with the pyro?" There is a sound technical reason for so doing. Straight pyro is not a good wetting agent. It is an excellent emulsifier, but that is not enough in the presence of grease. Washing is a complex process and no one chemical does everything best. A combination of an alkali to give wetting and pyro to emulsify dirt and give free drainage is best for dishes.

A trouble that is sometimes met with in using mixtures of anhydrous pyro with alkalis is that the alkali dissolves so much faster than the anhydrous pyro that the latter never gets a fair chance to do its work. Crystal pyro, $\text{Na}_4\text{P}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$, being already hydrated, dissolves as fast as the alkalis with which it is mixed. Crystal pyro is 60 per cent

Effect of pyro on ink stains: Both cloths were equally stained with ink. The one on left was washed with soap as usual and the stains were not removed. The one on right was washed with .05 per cent soap and .3 per cent pyro and the ink was completely removed.

as strong as the anhydrous theoretically, but practically its usefulness is unexpectedly high in these mixtures.

After the make-up of the dishwashing compound is settled, one must next determine how much to use. Obviously that depends on the hardness of the water, the amount of dirt to be removed, the time and temperature of washing and most of all on the personal opinion of the user. Too much does no harm, so too much is usually added. One quarter per cent, i.e. 1/3 ounce per gallon or one level tablespoonful to two gallons is usually enough for washing and four times too much for rinsing, which takes very little.

Though dishwashing has been considered first because of its simplicity, much more pyro is used in clothes washing. Most of the best known and most popular soaps for kitchen and laundry use have now about ten per cent of pyro in them. This change has occurred chiefly within the last two years and is by no means completed yet. Many others are expected to follow suit. There seems as yet however no trend toward including it in toilet soaps, though there is no reason against it.

In Clothes Washing

SOAP is used in clothes washing only in the amount of .01 to at most .2 per cent of the water, the commonest figure being .05—.1 per cent. Therefore with the usual 10 per cent pyro in the soap there must be only .005 per cent pyro in the water. It is hard to believe that so minute a percentage can have a measurable effect, but it is not hard to prove. Clearly so small an amount cannot act by redissolving the lime and magnesia of the usual hard water for about thirty times as



much pyro would be needed to do that. Also soap hinders redissolving of lime so much that little can occur under these circumstances. It is rather the emulsifying action of pyro that makes it of value here. Dirt that is emulsified might just as well be dissolved for practical purposes, for it rinses away in the wash water. Responsible firms have published statements showing that even the small percentages given here will double suds formation, double or triple the life of clothes by reducing rubbing required, and increase emulsification many times.

The emulsifying power of pyro is used in many other fields far from laundering. The largest and oddest is in drilling oil wells. One pound of pyro per foot of drilling is a common estimate among oil men. Since many oil wells now go deeper than 10,000 feet, consumption of

pyro is considerable. From .006 per cent to .06 per cent is added to the mud in which the rotary drill works, the purpose being to keep down viscosity without increasing permeability. Without pyro, the rotary mud, which is a selected clay, would turn to jelly and refuse to be pumped. With just a trace of pyro, the mud pumps willingly. More is not better though usually not harmful. The field man determines the viscosity of his mud roughly every hour or two and adds pyro cautiously until it is right. Though the oil industry consumes less pyro than soap, it is a good second.

When we look for the third largest use, we find nothing outstanding but rather dozens of uses, each of which is small because a pound of pyro goes so incredibly far. Making pottery, making cheese, improving fine papers, making cold water paint,

laying country roads, degumming raw silk, stabilizing hydrogen peroxide, and taking out ink stains. How's that for variety?

Pyro Patents

WITH trepidation we present an admittedly incomplete review of the patent situation. We are no lawyer and have been watching pyro patents for only a few years. The review is strictly confined to pyrophosphates. There are no patents on pyro itself or any special form of it. Also there are no patents on the usual method of manufacture. Almost all patents are on uses or on mixtures of pyro with other ingredients. In several cases the applicability of a patent to pyro rests on the validity of such vague phrases as "molecularly dehydrated phosphates." Can such broad phrases, which seem to cover all the metaphosphates, triphosphate, tetraphosphates and pyrophosphate too, be supported in court or would they be held broader than the disclosure and therefore void? So far as we know, the point has not been tested and the patents are assumed valid.

U. S. 1,903,041. March 28, 1933. Hall & Jackson assignors to John M. Hopwood, "Water treatment"—Pyro is added to boiler water feed with the purpose of having it break down in the boiler to orthophosphate and soften the water.

U. S. 1,914,312. June 13, 1933. Karl Vieweg assignor to Deutsche Gold and Silber Scheideanstalt, "Process for the manufacture of compositions of hydrogen peroxide—phosphate"—Pyro is mixed with hydrogen peroxide solution and dehydrated in vacuo.

U. S. 1,956,111. April 24, 1934. Conway, Weidmann & Roesner assignors to American Lurgi Corp., "Process for the production of acid disodium pyrophosphate"—Applicable only to the acid pyrophosphate.

U. S. 1,965,339. July 3, 1934. R. E. Hall assignor to Hall Laboratories, "Treatment of steam boiler feed water"—Pyro is added to boiler feed water in limited amount and the

water is then passed through a zeolite softener. The purpose is to hold the magnesia in the water with pyro while taking the lime out with zeolite. This produces a nonscaling water, since magnesia does not scale.

U. S. 1,984,968. Dec. 18, 1934. Fiske, Warren & Bryan assignors to Rumford Chemical Works, "Method of producing pyrophosphates"—Although the disclosure seems to cover all pyrophosphates, the claims are limited to making sodium acid pyrophosphate by dry-mixing strong phosphoric acid and caustic soda and roasting at 200°C.

British 435,317 applied for Jan. 24, 1935. W. J. Tennant, "Improvements in or relating to washing and cleansing agents and the like"—Mixtures of sodium pyrophosphate with a lesser amount of sodium carbonate are claimed as washing agents. There is no corresponding U. S. patent.

British 439,493 applied for April 12, 1935. W. J. Tennant, "Improvements in or relating to cleansing and the like agents"—Both pyro and sodium metaphosphate are added together to any standard washing compound and much greater efficiency is claimed than if either phosphate were used without the other. The patent mentions and describes slightly other British pyro patents 435,861, 437,128, 438,063, 378,345 and 424,959. No equivalent U. S. patent.

French 786,332 applied for Jan. 23, 1935. Chemische Fabrik, J. A. Benckiser, "Procédé de production d'agents de lavage à base de savon"—Alkali metaphosphates or pyrophosphates are incorporated into soap but only to such a degree that the pH does not fall below 8.5. There is no equivalent U. S. patent. If there were it would control all use of pyro in soap.

British 439,435 applied for July 31, 1935. Lever Bros., "Improvements in the manufacture of washing preparations and the like"—A soap substitute is made from a polyglycerol ester and sodium sulphate with or without addition of pyro. Use of pyro is not claimed as essential but merely casually mentioned.

U. S. Reissue 19,719, Oct. 8, 1935. R. E. Hall assignor to Hall Laboratories, "Water softening and washing"—This is a reissue of U. S. 1,956,515 of April 24, 1934. Water for laundering is softened with sodium metaphosphate qualified with just enough pyro to neutralize the acidity of the metaphosphate. Anyone concerned with this patent should consult a patent attorney, as the claims are very many and complicated and the legal status of a re-issue is involved also.

U. S. 2,008,651, July 16, 1935. R. E. Zinn assignor to Victor Chemical Works, "Method of coating flakes"—Among other claims are specific ones for spot-coating flakes of pyro with alkali carbonate or trisodium phosphate.

French 792,904 applied for July 25, 1935. Henkel & Co., "Produits de blanchiment, de lavage et de nettoyage, destinés plus spécialement à être employés dans l'eau ferrugineuse"—Mixtures of sodium perborate, pyrophosphate and carbonate are recommended for bleaching and washing where the water is iron-bearing.

Canadian 353,581, Henkel & Cie.—A cleaning compound composed of a lime-resistant surface-active compound with 8 or more cations and a terminal radicle to increase water-solubility plus a pyrophosphate.

U. S. 2,021,012. Nov. 12, 1935. C. R. McCullough assignor to Swann Research, "Process for production of acid alkali-metal pyrophosphates"—a process limited to the acid salt and intended to produce a baking powder ingredient.

U. S. 2,041,448. May 19, 1936. R. E. Zinn assignor to Victor Chemical Works, "Flaking amorphous solids"—A process of preparing many materials, including sodium pyrophosphate as flakes about .001 inch thick.

U. S. 2,041,473. May 19, 1936. J. Janota Jr. assignor to Victor Chemical Works, "Dentifrice polishing base"—Sodium pyrophosphate as a minor ingredient promotes dispersion of the solids of toothpastes.

(Turn to Page 72)

Continuous oil refining plant.
View of equipment operating
under the Clayton continuous
process.



The Trend in

OIL AND FAT REFINING

PART II

By Harold Silman

DISTILLATION methods for deacidification of oils and fats have been the subject of a number of American, German and British patents. The method of Stiepel consists in subjecting a thin film of the oil running down a plate to radiant heat in a highly evacuated chamber. A carefully regulated flow of an inert gas such as nitrogen is passed through the chamber, and the fatty acids are volatilized and carried away by the gas. It is clear, however, that it is essential for a very good vacuum to be maintained in the plant to avoid decomposition of the fat. In the Wecker process, vacuum steam distillation is the method used. The oil is preheated to about 100° C. and introduced into the highly evacuated distillation chamber in the form of a shallow layer. A series of chambers may be used along which the oil

passes, while jets of atomized steam are injected into it. The steam expands violently on entering the chamber so that the fatty acids are volatilized and carried away with it to cooled condensers where separation of the fatty acid from the water takes place. Complete deacidification cannot, however, be accomplished by this means, a small residue of about a half per cent of free fatty acid remaining. Deodorization is fairly complete as a rule, but the product is rather dark in color, so that if a light and absolutely neutral fat is required a final refining by alkali must be carried out.

A combination of this method with adsorbent earth refining as previously discussed is the subject of British patents held by the Lever combine. The method consists of passing the oil mixed with fuller's earth at a temperature of 95° C. through a horizontal cylinder which is heated to

200°-300° C. Simultaneously, superheated steam is blown through the mixture to remove free fatty acid and effect deodorization. The bleaching earth may then be separated by means of a filter-press or by centrifuging.

A modification of the above process is the subject of a Dutch patent whereby the oil preheated to 250° C. is sprayed into a vacuum fractionating column against a counter-current of superheated steam. Volatilization of the fatty acids is effected.

The vacuum distillation methods just described have the outstanding advantage that they simultaneously effect the deodorization of the fats. For the removal of odor from cheaper oils and fats, treatment with superheated steam is still the cheapest and most effective method. Of late, there has been substantial improvements in the plant used for this treatment. The malodorous products

to be removed in the case of vegetable oils are usually derived from the cortex and non-oleaginous portion of the seed during expression of the oil. As the volatility in steam of these compounds is increased by lowering the pressure, treatment is therefore carried out wherever possible under vacuum. The final product is quickly cooled in vacuo to prevent oxidation.

To speed up the process, pressures as low as possible are used and rapid contact of the steam and oil may be brought about either by spraying it into the reaction chamber or by feeding it onto plates in a thin layer.

A great amount of physico-chemical work is being done in the way of applying some of the newer processes which are still in the laboratory stage to fat refining on a plant scale. Such principles as molecular distillation and interfacial tension techniques may effect a radical alteration in the fundamentals of fat refining in the not too distant future.

TALLOW, which is still the basic fat in soap manufacture may be bleached to improve its color by treatment with fuller's earth or charcoal as already described in dealing with the removal of mucilage. Nevertheless, when darker fats are to be treated, some preliminary chemical method is desirable to effect a sufficient degree of bleaching. The initial salt treatment to which reference has been made, consists in heating the tallow in a tank by means of closed steam coils to a temperature of about 80° C. with about one-half per cent of salt. It is useful when the fat contains any considerable proportion of water or other foreign matter. The salt has the effect of coagulating the mucilaginous matter and removing the water by osmosis. The brine may be drawn off after standing overnight.

Bleaching of tallow and other fats may be carried out by means of hypochlorites, generally liberated *en situ* from bleaching powder. The procedure consists in agitating the fat by means of air and open steam with a strong solution of the hypochlorite at

a temperature of about 40° C. Hydrogen peroxide is said to be specially effective for the bleaching of palm oil, fish oils and certain of the drying oils. Owing to the comparative costliness of the reagent, this method is not used extensively although it has the advantage that the decomposition of the peroxide leaves no residue in the fat except water. The procedure consists in agitating with from 2 to 5 per cent of 100 volume hydrogen peroxide at 60°-80° C., preferably in the presence of 1 per cent of sulfuric acid to stabilize the reaction.

Palm oil is most commonly bleached by means of sodium dichromate and hydrochloric acid which method oxidizes the orange coloring material of the oil. Final purification may then be carried out by means of one of the active earths as already described. The oil is first melted by open steam, filtered through a comparatively coarse mesh and then treated with a salt solution to remove albuminoid and fibrous matter. It is then transferred to a lead-lined tank equipped with lead agitation coils and open steam.

The oil is heated at a temperature of 45° C. with a solution of sodium dichromate in five times its volume of hydrochloric acid. It is common practice to incorporate about 2 per cent of common salt with the oil charge prior to the oxidation treatment. The dichromate mixture is poured into the oil very slowly with continuous agitation, up to 1 per cent of dichromate being necessary for effective bleaching. After treatment, the bleach liquors are run to waste and the residual fat well washed with hot water. Ample settling time must be allowed after washing, or the oil will retain a greenish tint due to the retention of residual chromium compounds. Dichromate bleaching is also applied to the darker skin and related greases when these are to be used in soap manufacture.

Bleaching by means of air is applicable to palm oil and also to some of the drying oils. The method consists of blowing air through the oil at a temperature of about 90° C. by means of a distributor. It is im-

portant that the air should enter through fine holes in such a way as to come into contact with as much oil as possible. If a sufficient degree of improvement in color has not been obtained after aeration for 5 or 6 hours, it is inadvisable to continue the treatment longer since undesirable changes such as increased oxidation of the oil may be induced.

It has been proposed to use various catalysts to increase the rate of oxidation of the coloring matters in fats. One such material is cobalt borate in the proportion of 5 ozs. to 100 lbs. of oil, when bleaching is said to be completed in 2½ hours.

ADEQUATE refining is especially important in the case of oils which are to be used for hydrogenation. The basic principle of hydrogenation consists in the treatment of unsaturated liquid fats, such as whale oil, fish oils, linseed oil, greases, etc., with hydrogen gas in the presence of a catalyst. Addition of the hydrogen takes place, whereby a liquid unsaturated oil such as for example, oleic acid ($C_{18}H_{32}O_2$) is converted into a hard, saturated fat, i. e. stearic acid ($C_{18}H_{36}O_2$). Hydrogenated oils find their main application in the manufacture of edible fats, but they are of great value in the soap industry in so far as they increase the hardness of soap stocks.

The catalysts used in the hydrogenation process consist generally of nickel compounds, which may be prepared by precipitating nickel hydroxide on a carrier such as kieselguhr, fuller's earth, kaolin, etc., reducing the nickel salt in an atmosphere of hydrogen under carefully controlled temperature conditions. A temperature between 250° C.-300° C. is most suitable. The nickel is sometimes "activated" by the inclusion of other metallic salts, viz: magnesium and aluminium.

There are numerous alternative methods of preparing the catalyst. Interesting attempts have been made to use a catalyst based on activating the surface of massive nickel by various means. Perhaps the most important modified method consists in im-

incorporating nickel formate into the oil at 240° C., whereby an active catalyst is produced by reduction on passing in the hydrogen. This procedure has many operating advantages. The tendency towards burning of the oil at this temperature may be reduced by incorporating the formate into a portion of the oil prior to reduction and adding it later to the bulk of the material to be hydrogenated. Effective refining methods are essential in the preparation of oils to be hydrogenated, since the presence of impurities may poison the catalyst and renders it inactive.

Methods for the removal of mucilage and water have already been described in the paragraphs relating to caustic soda refining and decolorization by activated earths. Halogens or small quantities of sulfur compounds are also eliminated if these are present. The presence of an excessive proportion of free fatty acids is detrimental, and deacidification must be carried out prior to hydrogenation if the acid value exceeds 6. This is also important in order to avoid any recrudescence of objectionable odor in the finished product. Whale oil for hydrogenation should not have an iodine value greater than 50, for example, prior to treatment. It is rarely necessary to carry out any refining operation after hydrogenation.

THE selection of appropriate materials for plant construction in the refining industries, is not an easy matter since the presence of small quantities of various foreign metals have been shown to have undesirable effects on fats and on finished soaps. Iron is well known as a promoter of rancidity and oxidative changes in fats. Also, if larger quantities of iron enter into the material from storage or processing in iron vessels, the colored iron compounds will have an unfavorable effect on the appearance of the finished product. Quite small traces of copper are active catalysts of rancidity changes in fats which result in the formation of disagreeable off-odors. These considerations apply in the soap factory, but

to an even greater extent in refining processes where fatty acids and caustic alkalies are being dealt with.

Wood tanks are still widely used, but have the disadvantage of poor resistance to strong alkalies. The high cost of some of the more resistant alloys, however, militated against their general employment, until the advent of methods whereby thin sheets of more resistant materials can be rolled on or welded to steel sheets. Nickel has a very high degree of resistance to fatty acids and also to caustic alkalies. Nickel-clad steel produced by hot-rolling sheets of steel and nickel together, is a material of growing importance for the refining industry, which can be flanged and also welded. The steel may be nickel-clad on one or both sides. Steel clad with stainless chromium nickel steel is also on the market and has useful possibilities for certain processes.

Inconel, which is an alloy consisting of 80 per cent nickel, 14 per cent chromium and 6 per cent iron, is highly resistant to fatty acids, caustic soda, and sulfuric acid. Monel metal consists of 67 per cent of nickel and 30 per cent copper together with carefully regulated amounts of other metals. It is also a valuable material for oil plant construction despite the fact that it has a high copper content. Monel metal generally contains 11/4 per cent manganese and an equal amount of iron, together with smaller quantities of carbon and silicon. K Monel containing a small amount of aluminium has improved tensile properties and has been used for pump rods. S Monel, with an increased amount of silicon resists high pressure steam and fatty acids particularly well and is useful for steam coils. Both of these materials are available in thin sheets and can be used thus as tank linings.

The following sets of figures were obtained recently on field tests whereby specimens of various metals were exposed for 21 days, both in the liquid and in the vapor of a vacuum still refining crude fatty acids from a Twitchell saponification process.

METALS	—CORROSION RATE— Inches penetration per year.	
	Vapor	Liquid
Inconel .....	.0008	.0011
Monel .....	.0025	.0039
Nickel .....	.0033	.0041
¹ 18/8 Cr-Ni-Fe. .	.0016	.0012
² Ni-resist. ....	.0014	.015
Cast Iron .....	.073	.079

¹ These specimens were covered with shallow pits.

² Iron alloy containing 14 per cent nickel, 3 per cent chromium, 4 per cent copper and 2.3 per cent carbon.

Autogenously welded monel distillation plants in which heating coils and all fittings are welded into the plant have been constructed and have given good service.

Where acid processes are used, lead is the traditional material. Pure lead when used as a lining for wood or steel vessels, however, suffers on account of its poor mechanical properties which cause deterioration due chiefly to "creep."

For this reason, various metals have been added to lead to strengthen it mechanically and improve its chemical properties in certain directions. Care must be taken in using these lead alloys since, a change in conditions may result in a material, which was formerly quite suitable, deteriorating rapidly. For example, antimonial lead has good resisting properties towards acid at low temperatures, but at high temperatures it may be inferior. Tellurium lead has made headway lately on account of its good mechanical and chemical properties. The addition of these elements to lead increases its hardness considerably, however, and this may in some cases be a disadvantage from the constructional aspect.

A recent development is that of copper-lead of controlled composition which is not appreciably harder than commercial lead and yet is especially good from the point of view of durability. The addition of about .06 per cent of copper insures grain refinement, improves the resistance to creep, flaking and cracking and to acids. It is important, however, that the alloy be free from foreign metals, notably zinc, arsenic and iron. Copper-lead is now commercially available with less than .0006 per cent of

(Turn to Page 65)

CLEANERS...

for Rugs, Carpets, Upholstery

by Paul J. Smith

CARPET cleaning is usually carried out in dry cleaning works, rug laundries, or in plants specializing in the beating and shampooing of carpets. A considerable amount of work is also done by means of special machines designed for *en situ* cleaning where it is not possible to send the carpet to the factory. Factory cleaning has, during the last twenty years, undergone a steady change from a purely manual process to one which is fast becoming almost wholly mechanical.

The wet shampooing of carpets, which for many years has been considered the most satisfactory method, is usually carried out on the following lines. The well beaten carpet is spread out on the sloping cleaning floor or slab, as it is sometimes called, and the soap solution worked into the pile with deck scrubbers on stout brooms. Nowadays, more progressive cleaners use self-contained electrically operated floor scrubbing machines. After removal of the dirt and stains, special spotting solutions being used for the latter, the carpet is thoroughly flushed or rinsed with cold or warm water, usually both, and then the excess moisture removed with a squeegee or scraper. Sometimes a sour, such as weak acetic acid or a solution of sodium silicofluoride or sodium acid fluoride, is used to neutralize any free alkali which may be left in the carpet. Thorough rinsing follows the application of a sour. Next comes draining or hydro-extracting and drying in large sheds. This method of cleaning is, in principle, a favorite one with many European carpet cleaners, and while it can be relied upon to remove the maximum

amount of soil, it is sometimes very drastic in its action on the wool or jute fibres and causes serious shrinkage. Another rather common criticism of this method is that it encourages the running of loose acid colors and causes delicate patterns to be spoiled.

To overcome the disadvantages of wet shampooing, face cleaning methods were introduced some years ago. These are, of course, varied, but a fairly common process consists of padding the beaten carpet with dry cleaning soaps and then cleaning the carpet in a large rotary with dry cleaning spirit. While this method is fairly satisfactory for small carpets and rugs, it cannot be easily or economically applied to a large footage of carpets and is, therefore, very limited in its usefulness.

A later development in factory cleaning is the use of a face cleaning process which employs a lather or foam which is worked into the carpet by means of a specially designed machine provided with rubber scrubbing devices. This machine is equipped with a powerful suction which removes the dirt and exhausted detergent, the former being held in suspension in the solution, and also brings into operation the necessary cleaning fluids which are fed into the machine from overhead tanks. It is claimed that this mechanical process of cleaning, which does away with rinsing, and employs a uniform temperature for all working solutions, does not cause shrinkage or the running of loose colors.

Turning from factory to *en situ* cleaning, which is now success-

fully carried out in theatres, hotels, apartment houses, commercial and municipal buildings, etc., this also has changed from a manual to a mechanical process. Twenty years ago *en situ* cleaning, when it was carried out, and this was somewhat rare, was generally a hand process, the carpet being scrubbed throughout its entire length and afterwards mopped with wet cloths to remove spent soap and dirt, further mopping-up was then necessary to dry the carpet as far as possible without the use of heat. Naturally by this rather cumbersome and expensive method, the carpet required a long time to clean, at least five or six times as long as can now be guaranteed using one third the labor. By the use of the latest equipment, which includes vacuum cleaners, mechanical washers and electric driers, etc., it is possible to have a large carpet, such as the one in the foyer of an average theatre, ready for use 6 hours after cleaning. Thus busy hotels and theatres can have their carpets cleaned during the night without the slightest inconvenience to patrons.

Success of modern *en situ* cleaning is due mainly to the operation of three factors:—

1. Use of high efficiency special detergents.
2. Use of properly designed machines.
3. Employment of skilled labor working to a rigid time schedule.

Naturally methods vary a good deal but the process adopted by one of the leading English companies,



Electric Carpet Washing Company Ltd., is roughly as follows:—

First of all the carpet is vacuum cleaned using large and powerful industrial machines, $\frac{3}{4}$ H.P., which are equipped with sight glasses showing the amount of dirt being removed from any particular section of the carpet. The operator can thus see where the carpet is free of dust or where dust is still being drawn out of it. Following the vacuum cleaning, the edges of the carpet are washed by hand, using narrow brushes. This is necessary because the washing machines only clean within two inches of the edges. When a quarter of the total area of the carpet is vacuum cleaned, the first washing machines are started up, the men working in straight lines down the carpet in the direction of the pile.

Vacuum removal of the detergent foam after the upholstery has been scrubbed with special soapless cleaner. Complete removal of the detergent is essential in cleaning upholstery.

The actual mechanism of cleaning is carried out by means of electrically driven rubber bristles, which work in orbital motion at the rate of 500 per minute, and the suction fan contained within the machine operates at 10,000 r.p.m. The two brushes are kept constantly fed with the detergent solution, which is used at a temperature of 100 deg. F. and is brushed and forced right down into the pile of the carpet. Following the brushes is a squeegee which presses down on the carpet squeezing out all excess detergent which is sucked away through the

suction slit, and following the squeegee is a brush which smooths down the pile. The detergent sucked off the carpet is ejected into a waste tank and represents 90 per cent of the total volume used.

An experienced man using the washing machine can cover from 10 to 16 square yards per hour, and taking the vacuuming into consideration, this means 4 to 8 square yards of carpet completely cleaned and finished per hour, the maximum being only for exceptionally dirty and difficult material.

The amount of detergent solution left in the carpet is less than 10 per cent of the total volume and its temperature immediately after the washing machine has cleaned the carpet is approximately 90 deg. F. The detergent supply tank on the machine

holds $1\frac{1}{2}$ gallons which is enough to wash 8-12 square yards.

The composition of the detergent solution used in the washing machines is frequently a close secret, but cleaners are showing a marked preference to the newer soapless detergents which are perfectly odorless. The odorless compositions are, indeed, demanded by hotel and apartment house proprietors.

IT IS, perhaps, only natural that following changes in the methods of cleaning, there should also be corresponding changes in the composition of the detergents used in commercial carpet and rug cleaning factories. In the old days a neutral olein soap was generally preferred because of its free lathering power at low temperatures and the ease with which it could be rinsed away. Although this type of soap is still occasionally used by the more conservative firms, it is generally realized that a straight soap has a number of disadvantages.

1. Formation of insoluble calcium and magnesium soaps when hard water is used, fifteen pounds of soap being required to precipitate the hardness salts in one thousand gallons of water at 12 degrees hardness. These insoluble soap scums are precipitated on the fibres and give the carpet a dull appearance. Moreover it is said that the presence of insoluble soaps, which are akin physically to solid greases, cause dirt particles to adhere to the fibres very easily and tenaciously.

2. Free alkali naturally present in the soap or set free by hydrolysis of the solution is liable to cause acid dyes to run, and to swell the wool fibres and so cause serious dimensional changes.

3. The cleaned carpets frequently have a disagreeable rancid odor due to the presence of free fatty acids. This odor becomes more noticeable on storage or use in warm rooms.

4. The mechanical action of wet shampooing with ordinary soap is generally severe and tends to damage delicate carpets and rugs.



A battery of carpet scrubbing machines in action on a big job at the Mayfair Hotel, London. Up to 2,000 square yards of carpet have been cleaned in eight hours by this method.

To overcome the disadvantages of soaps, various changes have been initiated in the composition of the detergents which are designed to increase their wetting power, prevent the precipitation of insoluble hardness soaps and accelerate the cleaning action. Thus low titer soaps are now frequently used in conjunction with sulfonated oil, such as turkey red oil, and various phosphates are added to keep the hardness soaps either in solution or dispersed freely throughout the liquid. Hexametaphosphate and tetrasodium pyrophosphate, as well as the more soluble potassium pyrophosphate, are now being utilized. Besides preventing the precipitation of sticky and highly objectionable insoluble soaps, they peptize solid particles of dirt and facilitate their removal from the soiled carpet surface. The use of these phosphates is particularly useful in the case of patent washing or shampooing machines which remove by suction the

dirt and exhausted detergent solutions.

Soaps for the carpet cleaner are also used in conjunction with fatty alcohol derivatives and other new soapless compounds. The addition of a fatty alcohol product is particularly valuable in the case of expensive Chinese and Persian carpets as it leaves the fibres soft and lustrous, whereas ordinary soaps tend to make them harsh and dull. Thus the addition of 10 per cent of such products as sodium oleyl sulfate, sodium lauryl sulfate, etc., will result in a considerable improvement in the cleaning power of the soap.

One of the most interesting developments is the growing use of cyclohexanol soaps which have excellent emulsifying properties and can be easily rinsed away after performing their detergent action. The disadvantage of the hexalin soaps is that they have rather a distinctive odor, but it is claimed that when carpets are properly treated they leave the cleaners with only a characteristic and not unpleasant "cleaned" odor. An important advantage which can be said to be typical of the hexalin group of soaps is that they possess useful germicidal and fungicidal properties and thus help to remove objectional

organisms from the carpet where they are present.

There are two standard methods of making cyclohexanol soaps for the carpet cleaner. The first consists of mixing a soft soap, such as a linseed oil soap, with the solvent and then thinning down with either more of the same solvent, or a cheaper one, such as solvent naphtha. The second method, which is, of course, far more economical, entails the direct saponification of the oil in the presence of the hexalin. It is useful to consider quite briefly typical recipes for the two classes of soaps.

For the first, take 100 lb. good quality soft soap and mix with 50 lb. cyclohexanol in a crutcher or pan. Increase the temperature to 80 deg. C., stirring continuously the while. Then add 50 lb. solvent naphtha and continue stirring for another 15 minutes while the temperature drops. Instead of using naphtha, other solvents can be added, such as tetralin, trichlorethylene, tetrachlorethane, dichlorethylene, carbon tetrachloride, isopropyl alcohol, etc. If the proportion of cyclohexanol in the soap is too high, the foaming and lathering properties of the detergent solution will be reduced, but on the other hand, the selective stain and grease removing propensities will be increased. The writer is of the opinion that solvent naphtha is to be recommended not only on account of its cheapness, but because its presence in the soap is definitely helpful to the cleaner. The mixture can, of course, be diluted with water to suit the special requirements of the cleaner.

There are a number of recipes for preparing hexalin soaps by direct saponification, but the following recipe may be taken as typical:—To 100 lbs. linseed oil in the kettle add 40 lbs. hexalin and 39¾ lbs. caustic potash 50 degrees Be. Heat until a perfectly clear solution is obtained then add 240 lbs. water (24 gallons). Considerable modification of this formula is possible, for instance a proportion of the linseed oil may be replaced with coconut oil, or ammonium oleate may be used in place

of the soap to produce a superior type of emulsion. Some cleaners do not, however, favor the use of ammonia as they say it tends to injure worn and tender fibres and cause patterns to run.

Within the last three or four years triethanolamine soaps, commercial grades, have been used for building up suitable detergent solutions for the carpet cleaner, and they can be employed with or without a straight soap. They possess excellent emulsifying properties, are removed easily after completing their cleansing action and are completely odorless. Moreover, they may be used at a low temperature and are rapid in cleansing even the dirtiest carpet. These amine soaps have no deleterious action on even the most sensitive fibres, and are practically odorless.

These special soaps may be made very easily by merely mixing together proper quantities of amine and fatty acids. Useful proportions are 100 lbs. stearic acid for 10-15 lbs. triethanolamine. The oleate is usually preferred to the stearate as it can be rinsed away easier than the fully saturated fatty acid soap. Experiments carried out with triethanolamine naphthenate show that this new detergent has superior wetting and cleansing properties and should, therefore, prove of value for particularly dirty carpets sent from offices and restaurants, etc. Although commercial naphthenic acid has a sharp and distinctive odor due to the presence of small quantities of unidentified thio groups, grades of the acid can be obtained which have very little odor. Arthur Minich and Herman Levinson, *Textile Colorist*, 60, 698-9, 705, 1938, agree that purified naphthenic acid soaps are excellent emulsifying agents, strong wetting-out agents, good detergents, immune to oxidation and rancidity development and possess germicidal and fungicidal activity and are not readily salted out. Some of the glycol detergents have also been used with success and it is claimed that they are more stable than the triethanolamine soaps and give a better lather.

Referring briefly to dry cleaning soaps used when small carpets and rugs are dry cleaned, these are made in a number of different ways, but either ammonia or potash soaps are usually preferred. The former being prepared by saponifying 282 parts of oleic acid by weight with 51 parts ammonia (.880) in the presence of a dry cleaning solvent, such as solvent naphtha. Generally one pound of this soap is sufficient for 40 gallons of naphtha, or whatever cleaning fluid is used. Potash or mixed potash and sodium soaps are made in a similar manner to ammonium soaps, taking care that 10 per cent free oleic acid is left unsaponified in the soap. If desired, the soap can consist of a purchased soft soap to which is added 10 per cent free olein. A. Davidsohn (*Les Matieres Grasses*, 30, 114-6, 1938) recommends 20 parts soft soap plus 2 parts olein dissolved in 40 parts water plus 10 of alcohol. To the solution are added 20 parts of tetrachlorethane or trichlorethylene. Another formula, he gives, consists of 100 parts of olein plus 25 of butyl cellosolve plus 25 of cleaner's naphtha. This is heated to about 60 deg. C. and then 20.5 parts of triethanolamine, 8 parts of solid caustic potash and 13 parts of water are added. It is usually the experience of practical dry cleaners that the simpler the soap the more effective it is in use and the 10 per cent free oleic acid soap is one which is in general use in several of the largest cleaning works in England.

DETERGENTS for *en situ* cleaning usually contain very little if any soap. Soapless detergents include mixtures of sodium hexametaphosphate with the sodium salt of a sulfated fatty alcohol, particularly sodium lauryl sulfate, the latter being present to the extent of 20 per cent of the total weight of cleaning composition. Alkyl aryl sodium sulphonate (Nacconol NR) is also used in conjunction with the phosphates. One recipe recommends 3½ lbs. Nacconol to 25 gallons of soft water containing 3½ lbs. mixed

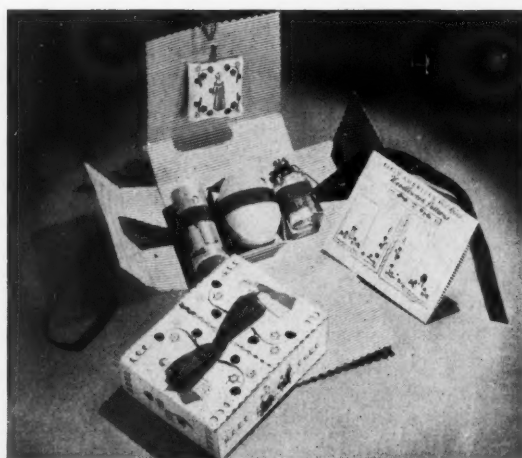
(Turn to Page 65)



The wrap for the new bath size of P & G's "Camay" is an exact replica in expanded size of that used for the smaller toilet size cake. Bath "Camay" is currently being introduced in the Toledo market.

New Products and

Shulton, Inc., New York is packing needlework patterns with its "Early American Old Spice" toiletries. L. Bamberger & Co., Newark, are tying in with an embroidery contest using the patterns.



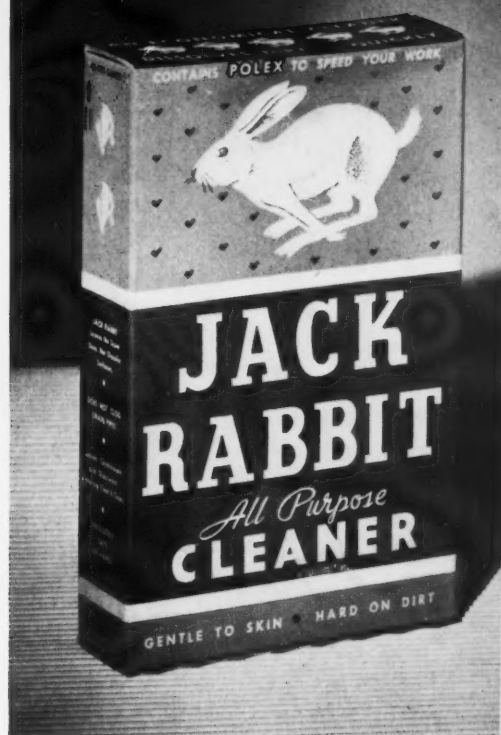
Household Chemical Products, L. I. City, N. Y., has recently brought out "Foamaway" upholstery and fabric cleaner. It is packed in 24-oz., half-gallon and gallon sizes. Cans by Eastern Can.

Packages



"Garbex," new garbage deodorant introduced recently by Sherco Products Corp., Syracuse, is marketed in a handy pick-up carton holding twelve cans.

S. C. Johnson & Son, Racine, Wis., recently introduced "consumer dividend" packages for their liquid and paste waxes and floor polish. Containers are specially designed to spotlight the 1/3 dividend.



American Laboratories Sales Co., Detroit, has recently introduced a new product, "Jack Rabbit" cleaner. Introductory offer included a free toss-up Jumbo Rabbit Balloon.

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News.....

Bader's Firm in Receivership

Following the report last month of the suicide of John Bader, part owner and manager of Zillessen & Bader, Inc., Riverdale, N. J., textile soaps, came the announcement early in March that three creditors of the firm had filed an involuntary petition in bankruptcy. George Anderson has been appointed as receiver and the firm is continuing to operate under his direction. The largest creditor was reported to be the First National Bank of Bloomington whose claim of \$48,335 is based on trade acceptances and checks which it is said to have cashed. The other two petitioners were E. M. Sergeant Pulp & Chemical Co., New York, to whom the soap company owed approximately \$11,000, and Lotte Chemical Co., Pater-son, with a claim of \$835.

Katz Joins Manhattan Soap

Israel Katz, general manager of J. Eavenson & Sons, Camden, N. J., for the past fifteen years, has just resigned this position to join Manhattan Soap Co., Bristol, Pa., as vice-president and general manager. Prior to taking over the active direction of the Eavenson business Mr. Katz had served Wilson & Co., meat packers, of which company Eavenson is a subsidiary, for twelve years as chief chemist, as superintendent of their vegetable oil refineries, and in other capacities. Mr. Katz has been for many years an outstanding American authority on soap manufacture. He served as a member of the code authority of the soap industry under the N.R.A. and has also been a director of the Association of American Soap & Glycerine Producers. He was president of the Industrial Soap Association for several years. Currently he is serving as chairman of the section on straight soap specifications of Committee D-12 of the American So-

ciety for Testing Materials. Mr. Katz spends much of his leisure time in charitable work. He is national president of the Deborah Jewish Tuber-



I. Katz

culosis Society. His hobby, strange as it may seem, is writing poetry.

Oscar Burke is president of the Manhattan Soap Co. and Frank Burke is secretary-treasurer. During the past two years, the company has had a remarkable expansion in its business, especially in the sale of its "Sweet-heart Soap." Reports in the soap industry indicate that their sales have increased five-fold since 1937.

Manhattan Soap was founded by the late Frank Burke back in the late eighties with a two-story plant in upper New York City. He was the father of the present Burkes and was the first manufacturer of the original "Coal Oil Johnny" soap for its promoter, Marous Jenkins, during the Gay Nineties. The elder Burke had learned the soap business from one W. A. Grant in Houston, Texas, and had migrated from that city to New York to start the Manhattan Soap Co.

The New York Produce Exchange recently announced that it will establish a futures market for trading in prime crude soy-bean oil.

Report on Soap Talks

A bulletin has just been issued by the Association of American Soap & Glycerine Producers reporting on the informal round table discussion held following the annual soap industry meeting to consider the status of soaps under the Federal Food, Drug and Cosmetic Act. It was very evident, following the talks that precise answers to most questions on the status of soaps cannot be given at this time. As a matter of fact, many questions will not be settled until the courts have made their contribution to interpretation of the law. One of the first important points to be cleared up is how the FDA, and possibly the courts, will interpret the word "soap,"—broadly or narrowly. The line between soaps and cosmetics will also be a difficult one to draw, the talks indicate. Copies of the association's recent release are available to readers of SOAP.

Iowa Soap Earnings Up

Iowa Soap Co., Burlington, Iowa, recently reported a net income of \$141,865 for 1939. This was equal, after preferred dividends, to \$22.72 each on 5,363 common shares, as compared with an income of \$38,418 equal to \$3.26 a share in 1938.

New Pine Soap Powder

A new type soap powder in which a pine needle odor has been incorporated, and also a pine detergent have been announced by Chemical Manufacturing & Distributing Co., Easton, Pa. The company has also added to its line of soap products, two corresponding items strongly perfumed with sassafras. These materials are designed to compete with liquid scrub soaps of the same odors. A new catalog has recently been issued by the firm listing these items and other

cleaners, detergents, waxes, disinfectants, and similar sanitation products of their manufacture.

Fred Staph, formerly connected with the Sterling Products Co. of Easton, has become associated with Chemical Manufacturing & Distributing as chief chemist and plant superintendent, according to C. E. Schaad, president of the company. The company is located in the former extensive plant of the Hercules Powder Co., on Bushkill Drive in Easton.

Puritan Soap Changes Name

Puritan Soap Co., Rochester, N. Y., which was founded in that city in 1823 (then Rochesterville), has changed its name to the Puritan Co., omitting the word "soap," according to John F. Bush, vice-president and general manager. The growth of the Automotive Division of the company during the past few years accounts for the change. The soap and supply end of the firm is now designated as the "Puritan Soap Company Division." No change in policy, stockholders or officers has been made.

Dismiss Trademark Suit

A trademark infringement suit brought by Daland & Co., Yonkers, N. Y., against Hewitt Soap Co., Dayton, O., was recently dismissed by Federal Judge Clarence G. Galston. The Daland company had sued for an injunction to prevent use of the trademark "Smiles" on soap, and for an accounting of damages because of alleged infringement. Judge Galston ruled that no use of the trademark by the Hewitt company or its predecessor in approximately 15 years had been shown and held that neither an injunction nor an accounting was warranted.

Soap Employment Index Down

The employment index for the United States soap industry dropped several more points in January of this year to reach the figure of 83.4 as compared to 85.1 for the previous month of December, 1939, and 79.1 for the 1939 January mark. The payroll index also moved downward, the

Survey Soap Preferences

Chicago housewives buy toilet soap chiefly on the basis of "purity," according to a survey of brand preferences conducted recently by the research bureau of DePaul University. Just how the housewife determines "purity," a topic which would make very interesting reading is unfortunately omitted from the report. Of the 10,325 women questioned, 25 per cent nevertheless gave "purity" as the reason for their selection. "Odor" was second highest ranking reason, with 18 per cent, "lather" third with 17 per cent, and "quality" fourth with 13 per cent. The editors of *Soap* would also welcome further particulars as to what yardstick of soap "quality" Chicago housewives use. Other answers included the following observations: "like chain store quality"; "easy on skin"; "deodorant"; "size." No one mentioned "economical" or "cheap" as the motive of choice, as was true of other household commodities about which they were questioned. Summarizing the statistics, Prof. L. M. McDermott, head of DePaul University's research bureau and director of the survey, remarks: "It would seem as if the housewife is interested primarily in a good and sanitary soap," which seems a not illogical preference.

figure standing at 100.3 as compared to 102.1 for December, 1939, and 94.9 for January, 1939.

P&G Expand Baltimore Plant

Procter & Gamble Co. recently acquired title to a building at Beason and Haubert Streets, Baltimore. The building, formerly owned by the Hughes Furniture Manufacturing Co., contains about 70,000 square feet of floor space and provides room for the expansion of Procter & Gamble's present plant at Haubert and Nicholson Streets.

Cite Sweetheart Soap

Manhattan Soap Co., distributor of "Sweetheart" toilet soap, New York, recently signed a stipulation with the Federal Trade Commission to cease representing that research ex-

"Lux" led the list of toilet soaps as the preference of 1,830 or 18 per cent of the total. "Palmolive" stood second with 14 per cent; "Life-buoy" third with 13 per cent and "Camay" fourth with 9 per cent.

In expressing their preference for scouring powders 24 per cent of the Chicago women gave first place to "Kitchen Klenzer." "Old Dutch" ranked second with 12 per cent, "Bon Ami" third with 9 per cent, and "Gold Dust" fourth with 7 per cent. Many users, according to the report, showed very little definite preference, apparently feeling that one brand works as well as another. "Good cleaner" was given by 20 per cent of the women as the reason for their preference and "does not scratch" was the second most frequent reason, with 13 per cent. Third reason was "price" and "cleans quicker" fourth. Other reasons advanced were, in the following order, strength, efficiency, softens water, odor, package. 27 per cent of those interviewed had "no reason" for choosing one brand of cleaning powder over another.

The survey, made during December and January, was conducted by DePaul University of Chicago without commercial sponsorship. Several other household commodities were included in the complete study.

perts or laboratories have tested in connection with their quality ratings of soap, all brands of soap; that beauty experts endorse the use of "Sweetheart" toilet soap, or that doctors prescribe its use. The company also agrees to cease the representation that use of the soap will cause the skin to become healthy or keep it healthy, or that its use will cause one to stay young.

Givaudan to Move

Givaudan-Delawanna, Inc., New York, is planning to move its general offices to the McGraw-Hill Building, 330 West 42nd Street, on May 20th, where it has leased several thousand square feet of space. The Givaudan plant is located at Delawanna, N. J., and additions have recently been made to that unit.

Coventry Soap Correction

Our account last month of the establishment of Coventry Soap Co., Ltd., at Buffalo, N. Y., contained a number of inaccuracies which have been corrected by the organizers of the new firm. I. Stahl, president, and Milton Feldman, vice-president and treasurer. The old Larkin factory has been leased and the equipment bought. The concern will market its own brands as well as private brands, specializing in the fine toilet soap field. A New York sales office has been opened at 1133 Broadway under the direction of Mr. Feldman. Mr. Stahl will supervise production at Buffalo.

German War Soap Uses Kaolin

The standardized soap currently in use in Germany is said to be considerably more satisfactory than the so-called "clay" soap developed during the 1914-1918 war period, according to such reports as pass the war-time consorship. Developed since the outbreak of war, this soap contains only 40 per cent fat, the remaining ingredients comprising chief-

ly kaolin, supplemented by various other inorganic materials such as water-glass. Its objectionable features are a disagreeable odor and poor cleaning properties. Germany has almost unlimited resources of kaolin.



Announcement was made in SOAP last month of the appointment of Breckenridge Jones as assistant sales manager of the soap department of Colgate-Palmolive-Peet Co. Mr. Jones had formerly been an executive in Procter & Gamble Co.

Soap Exhibits at Beauty Show

Soap and shampoo manufacturers were numerous represented with exhibits at the 17th annual Mid-Winter Beauty Trade Show in Chicago, March 4th to 6th. Procter & Gamble Co., Cincinnati, presented Edyth Tompkins, nationally known hair stylist, who demonstrated use of "Drene" shampoo for hair dressing. K. R. McKowen and H. D. Baldridge of Cincinnati were in charge with a staff of ten assistants. Conti Products Corp., New York and Chicago, featured "Conti" concentrated shampoo granules and "Conti" pure Castile soap, with Frank Schaidler, manager of the company's beauty division, New York, in charge.

Two Chicago concerns, Rinse Products, Inc., and Gibbs & Co., used the show as an opportunity for introducing two new shampoo products; "Final Touch" for the former and "Gabrielleen" for the Gibbs house. Laco Products, Inc., Baltimore, sent a display of their "Hi-Lather" sham-

poo, Castile soap and shampoo purls. C. O. Young, Baltimore sales manager was on hand, assisted by Frank V. Scarnavack. Chicago district sales manager, to talk up their "Bonus Deal" offering a 10 per cent discount to convention buyers. "Studio Girl" shampoo, manufactured by The House of Taylor-Rea, Los Angeles, was displayed in a booth supervised by Glen Slaughter, midwest district sales manager. Stress was laid on use of this product by Hollywood stars.

Among other exhibitors were the following: Paragon Distributing Corp., New York, with Miss E. Olson presenting "Eternol" tint oil shampoo; Ben-Cole Laboratories, Chicago, with Bernard Benjamin, proprietor, displaying "Gro-Tex" shampoo; Boyer International Laboratories, Chicago, Louis Clement in charge with a line of pastel facial soaps and other products; and J. Notovitz, Inc., Chicago, Jack Karp, sales manager, in charge, displaying numerous brands of soaps and shampoos.

Status of Soap Shampoos

Shampoos, whether "soap" shampoos or not, are not entitled to the exemption granted to soap under the new Food, Drug and Cosmetic Act, according to the latest informal opinion released by the U. S. Food & Drug Administration in answer to a question from a member of the soap industry. Said the FDA: "It is our opinion that an article described as a shampoo is not a soap within the meaning of the exemption contained in Section 201 (i) of the act and that the insertion of the word soap in the name of this product will not entitle it to the exemption provided for soaps."

However, it was admitted that it is sometimes difficult to apply a general principle to all specific cases, and that some situations have been called to the Administration's attention that are real border line cases. In such cases, the individual facts involved in the situation will govern the determination of the status of the product. As an example, it was said that there is no objection to stating on the label of a soap, that has been used and sold as a soap for general cleansing purposes, that it also can be used for washing the hair—and this would not classify it as coming outside the exemption. Applying the same theory to liquid soaps, sold and used in the past for general cleansing purposes, but also recommended for cleansing the hair, and the situation would closely approach the border line, says the FDA.

Soap Makers Protest Rates

Procter & Gamble Distributing Co., Long Beach, Calif., recently filed with the Maritime Commission a protest against the proposed increase of freight rates on vegetable oil cake.

To Manage P&G Java Plant

Identified for over three years with Procter & Gamble Company interests in Cuba, Frederick W. Garber, Jr., of Cincinnati was married March 2nd to Miss Louise Pierce in Glendale, Ohio. The couple left immediately for California, from where passage was taken on March 10th for



"... they keep ahead in can developments, and in research. They go the limit to give us quality and service. And with their factory set-up we're always sure to get the deliveries we need."



AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.

Manila. After acquainting himself with company operations in the Philippines, Mr. Garber will go on to Java to establish his residence there as manager of the new P&G plant in Soerabaga. He is a 1934 Cornell University alumnus.

Appelbaum Elected Director

Permutit Co., manufacturers of water conditioning equipment, New York, recently announced the election of S. B. Applebaum as a director. Mr. Applebaum has been with the Permutit Company for more than 25 years, during many of which he was the technical manager, and more recently, vice president and secretary. Other new Permutit directors are, Evander B. Schley of Moore & Schley and Gustave Mahler, secretary of Schroder Rockefeller & Co.

Colgate Issues New Stock

Colgate-Palmolive-Peet Co., Jersey City, is offering an issue of 125,000 shares of 4¼ per cent preferred stock at 101 per share, representing an aggregate offering price of \$12,625,000. The proceeds from the sale of this issue will be used to redeem, at \$102.50 per share plus accrued dividends, the 125,000 shares of

6 per cent preferred stock now outstanding.

Survey P&G Growth

"A Survey of the Procter & Gamble Company" is the title of a 20-page booklet in two colors published by a Cincinnati brokerage house. Giving an historical outline, the booklet sketches growth of the

soap industry and increase in the number of P&G products, giving detailed facts, figures and graphs, covering a period of 103 years.

William E. Scott Dies

William E. Scott, former president of the Scott Soap Works, died in a hospital in Poughkeepsie, N. Y., March 2nd. He was 75 years old.

Soap Fat Consumption Gains 7½% in 1939

FACTORY consumption of animal and vegetable fats and oils by the soap industry showed a sharp increase for 1939 over 1938 totals, according to figures just released by the U. S. Bureau of the Census. The 1939 consumption figure for the soap industry as reported by the Census Bureau was 1,653,704,000 lbs., to which must be added 177,221,000 lbs. of foots, practically all of which find their outlet in the soap kettle, giving a grand total of 1,830,925,000 lbs. This compares with 1938 figures of 1,468,535,000 lbs., plus

235,562,000 lbs. of foots for a grand total of 1,704,097,000 lbs., the gain for 1939 figuring approximately 7½ per cent.

The relative importance of the soap industry as a consumer of fats and oils showed a further gain this year. Out of the total for all industries of 4,802,989,000 lbs. of fats and oils, the soap industry's take amounted to 38 per cent. The comparative figure for 1938 was 37 per cent, and for 1937,—34 per cent.

The most important fat for soap use continued to be inedible

**Factory Consumption of Primary Animal and Vegetable Fats and Oils,
By Classes of Products, Calendar Year 1939**
(Quantities in thousands of pounds)

KIND	TOTAL	Shortening	Oleomargarine	Other Edible Products	Soap	Paint and Varnish	Linoleum and Oilcloth	Printing Inks	Miscellaneous Products	Loss (including oil in foots)
TOTAL	4,802,989	1,406,318	241,705	426,053	1,653,704	423,113	107,721	22,873	344,281	177,221
Cottonseed oil	1,321,190	904,950	98,657	233,442	1,061	51	.....	192	2,017	80,820
Peanut oil	67,093	51,713	2,445	8,678	805	.....	.....	.....	161	3,291
Coconut oil	529,154	20,659	38,516	43,931	388,912	707	.....	3	3,852	32,574
Corn oil	84,067	1,453	489	65,384	4,441	155	.....	.....	1,586	10,559
Soybean oil	369,760	201,599	70,822	32,345	11,177	21,720	6,438	62	9,332	16,265
Olive oil, edible	3,983	.....	.....	3,798	54	.....	.....	.....	131	.....
Olive oil, inedible	5,514	.....	.....	.....	1,439	14	.....	.....	4,061	.....
Sulphur oil or olive foots	19,370	.....	.....	.....	19,068	.....	.....	.....	302	.....
Palm-kernel oil	10,554	266	473	5,292	3,657	.....	.....	.....	36	830
Palm oil	271,046	113,078	1	1,352	102,146	1	.....	5	29,681	24,782
Babassu oil	63,193	506	13,944	8,459	37,633	.....	.....	.....	6	2,645
Sesame oil	2,266	724	.....	1,102	14	.....	.....	.....	290	136
Rapeseed oil	6,577	37	.....	.....	2	79	.....	.....	6,459	.....
Linseed oil	344,975	.....	.....	.....	1,780	246,965	68,023	17,526	10,564	117
Tung oil	90,720	.....	.....	.....	.....	82,307	3,763	2,105	2,545	.....
Perilla oil	42,546	.....	.....	.....	1	28,674	10,758	1,915	1,198	.....
Castor oil	41,090	.....	.....	.....	946	11,439	88	317	28,277	23
Other vegetable oils	35,852	887	.....	9,181	7,364	5,816	1,264	78	10,709	553
Lard	15,253	7,398	1,355	6,317	50	.....	.....	2	28	103
Edible animal stearin	32,285	25,574	3,069	3,142	278	.....	.....	2	160	60
Oleo oil	12,911	470	11,865	147	67	.....	.....	.....	362	.....
Tallow, edible	62,246	56,671	69	3,483	418	.....	.....	1	1,445	159
Tallow, inedible	874,099	.....	.....	.....	785,041	97	1	4	88,795	161
Grease	210,911	.....	.....	.....	120,856	47	1	449	89,038	520
Neat's-foot oil	5,678	.....	.....	.....	11	24	.....	4	5,622	17
Marine animal oils	58,650	12	.....	.....	51,522	36	.....	4	7,002	74
Fish oils	222,006	20,321	.....	.....	114,961	24,981	17,385	204	40,622	3,532

Every soap manufacturer needs a copy of this book!



The manufacture and testing of all types of soaps are thoroughly covered in this recently published book. The authors, with twenty years' experience in soap manufacture, have produced a practical book which has met with wide approval. MODERN SOAP MAKING, a 540 page volume, costs \$7.50 in the United States and \$8.00 elsewhere, postage prepaid. Order a copy now.

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254 WEST 31st STREET

NEW YORK CITY

Fat and Oil Consumption

By The American Soap Industry 1932-1939

Fats and Oils	1932 (1000 lb.)	1933 (1000 lb.)	1934 (1000 lb.)	1935 (1000 lb.)	1936 (1000 lb.)	1937 (1000 lb.)	1938 (1000 lb.)	1939 (1000 lb.)
Tallow	549,186	508,824	662,858	663,002	660,020	613,509	702,267	785,041
Coconut oil . .	353,527	322,264	341,124	229,711	307,376	252,241	342,982	388,912
Palm oil	168,009	187,962	154,704	87,311	78,453	141,358	91,642	102,146
Grease	143,724	124,743	142,782	98,086	98,714	94,247	96,356	120,856
Fish oils	49,091	52,168	64,548	109,970	128,044	123,879	79,874	114,961
Whale oils . . .	48,944	44,895	33,996	28,440	32,603	65,130	66,080	51,522
Palm-kernel oil	3,565	6,278	16,516	37,173	26,443	111,514	29,498	3,657
Olive foots. . .	30,877	31,878	30,411	31,507	23,965	17,984	15,013	19,068
Soybean oil . .	5,571	4,235	1,354	2,549	5,023	10,274	10,897	11,177

tallow of which 785,041,000 lbs. were consumed in soap manufacture in 1939. Second in importance was coconut oil, of which soap makers used 388,912,000 lbs. in 1939. Considerably more grease went to the soap kettle in 1939,—the total for the year being 120,856,000 lbs., an increase of 25 per cent over the total for the preceding year. Fish oils also showed a substantial gain, the total consumption in this classification for soap use being 114,961,000 lbs. in 1939, a gain of 44 per cent over the 1938 total. This more than compensated for the drop in soap use of whale oil. The 1939 soap whale oil figure was 51,522,000 lbs., 30 per cent under the 1938 figure. Palm oil to the amount of 102,146,000 lbs. went into soaps in 1939, the figure like that for tallow and coconut oil keeping approximately the same percentage relationship to the totals for the previous year. Another important change in the consumption picture was noted however in palm kernel oil which showed a big decrease in use in 1939. Use of palm kernel oil dropped to the abnormally low figure of 3,657,000 lbs. last year, as compared with 29,498,000 lbs. in 1938. An equalizing factor was the sharp increase in use by the soap industry of babassu oil during 1939. Consumption jumped from 8,389,000 lbs. in 1938 to 37,633,000 in 1939.

The ring is obtained by remitting ten cents and ten "Crystal White" wrappers.

Magnus Gives Beefsteak

Magnus, Mabee & Reynard, Inc., New York perfuming materials suppliers, were hosts to a group of wholesale druggists and drug manufacturers at a beefsteak dinner at the Hotel Astor, New York, last month, preceding the annual meeting of the Druggists' Supply Corp.

Dewey Almy Chicago Plant

Dewey & Almy Chemical Co., Cambridge, Mass., has purchased a 5½-acre tract at Stickney, Ill., in the Chicago suburban district, and plans immediate erection of an extensive

plant. The first unit, for which a \$125,000 contract has been let, will provide 30,000 square feet of floor space. The company manufactures specialties for various lines including soap raw materials.

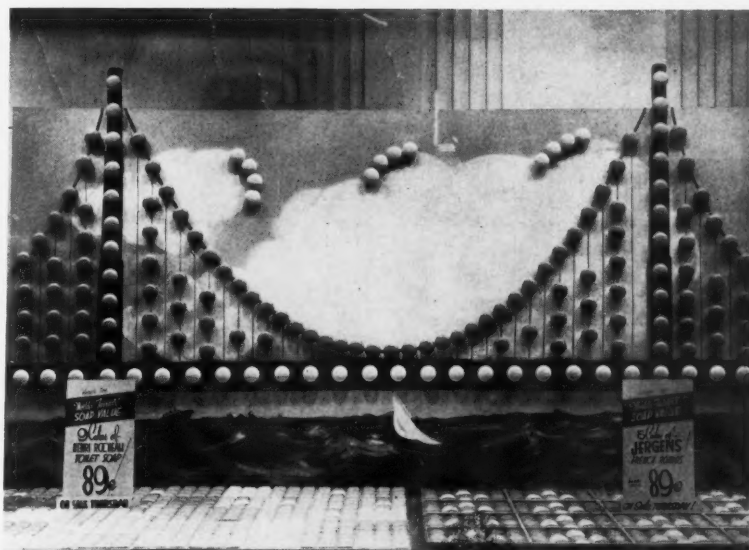
Joseph Hart With Hentz

Joseph W. Hart has just joined H. Hentz & Co., New York, as manager of their vegetable oils and animal fats department.

Laurel Soap Exhibit

Laurel Soap Mfg. Co., Philadelphia, will display hosiery, underwear, yarn, and piece goods finished with the "Laurel" finishes, at its booths Nos. 210 and 211 at the Knitting Arts Exhibit, April 15th to 18th.

The San Francisco Golden Gate Bridge, with cakes of toilet soap instead of blocks of stone as building materials, was the theme of an ingenious window display used recently by the Gottschalk Department Store, Fresno, Calif. Display featured Andrew Jergens soaps.



CPP "Crystal White" Premium

The Berkeley, Calif., office of Colgate-Palmolive-Peet Co. is offering a sterling silver birthstone ring in a promotional campaign for its "Crystal White" laundry soap in that district.

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At \$1.50 per lb.:

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LILAC No. 28
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PINE No. 14
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At \$2.00 per lb.:

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(Lavender—Eucalyptus Type)
CEDAR No. 5
HONEYSUCKLE No. 15
ROSE No. 33

At \$2.50 per lb.:

ALMOND No. 7
APPLE BLOSSOM No. 6
HONEY No. 6
HONEY LILY No. 14

At \$3.00 per lb.:

BOUQUET No. 149
(Vanilla Type)
CORYLOPSIS No. 6
INDIAN HAY No. 5
ORIENTAL No. 17
SWEET CLOVER No. 5
TRAILING ARBUTUS No. 5

For demonstration of the effectiveness of any of these fragrances send us an unperfumed sample of your product. Can also supply many other perfumes from stock or to your own odor and price specifications.

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KILLING power, alone, will not win lasting acceptance for your insect spray. But the right **combination**—killing power **and** pleasant fragrance—most certainly will! In this connection, expert advice in the selection of lethal and aromatic ingredients is important and that's where your suppliers can help you.

Call in the makers of toxic materials first and without regard for resultant odor, let them develop for you a product of maximum killing effectiveness. With this composition determined you can then think about fragrance—or better still, let our skilled perfumers think about it. Simply send us an unperfumed sample of the crude materials along with details of composition, odor preference and cost limits to which we must adhere. With this to guide them our laboratories will be able to hide the noxious character of your "killer" behind a mask of pleasant fragrance, thus rounding out the combination that means bigger stakes from increasing sales.

For those who prefer to do their own perfuming we offer a fine selection of scientifically-made, laboratory-tested aromatic specialties designed to provide complete and lasting coverage of repelling odors at very moderate cost. Inquiries, with details of your cost and odor requirements, are cordially invited.

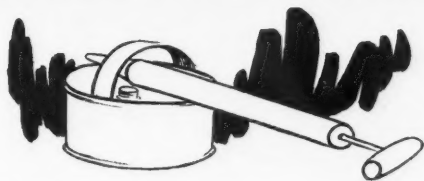


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Completely neutralizes the lethane odor effect in products containing Lethane No. 384 Special. Leaves no perceptible odor of its own. Powerful, economical.

SAFRELLA

An excellent and very inexpensive substitute for Artificial Sassafras. Can be used in all insecticide, germicide or technical mixtures.

JAVOLLAL

A powerful and efficient substitute for Citronella Oils of Java or Ceylon. Approximates twice the strength of Citronella and imparts a finer, cleaner and more attractive odor. May be used in insecticides, soaps and all technical mixtures.

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VARI) FRANCE

New Book on Soap Making

"Soap Manufacture — The Chemical Processes" is a new volume by J. H. Wigner being published by Chemical Publishing Co., New York. Although copies have not yet been released, it is described as a handbook for students and those engaged in the manufacture of hard soap with special attention being focussed on the processes of soap boiling proper. The author, it is stated, has evolved a method of controlling the process of soap boiling not dependent on rule of thumb or on the experience of individual soap boilers. This method is described for the first time in his new book. Copies will be priced at \$4.00. A more detailed review will appear in the next issue of *Soap and Sanitary Chemicals*.

Waterless Shampoo

Jean Jordeau, Inc., New York, is distributing a new "Jordeau's," waterless shampoo. It is claimed that only a few teaspoonfuls suffice for a shampoo, and that no rinse is required. It is further claimed that after this treatment the hair is ready for setting.

Sterling Acquires Cummer Co.

Sterling Products, Inc., medical and toilet preparations, New York, recently acquired control of Cummer Products Co., Bedford, Ohio, makers of "Molle" shaving cream, "Energine," and other preparations.

Fauster Returns to Owens

Carl U. Fauster, formerly assistant advertising manager for Owens-Illinois Glass Co., Toledo, and more recently account executive with United States Advertising Corp., has just rejoined Owens-Illinois. He will have charge of advertising for Libbey Glass Co.

H. D. Hicks Dies

Herbert D. Hicks, district manager of the B. T. Babbitt Soap Co. for 28 years, died at his home in Winnetka, Ill., on February 15th. He was 73 years old.



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Contracts Awarded

Laundry Soap Award

Kirkman & Son, Brooklyn, were awarded the contract on 200,000 lbs. laundry soap at 3.82c in a recent opening by the Army Quartermaster at Fort Sam Houston. Other awards at the same opening went to Day & Frick, Philadelphia, who bid low on 10,800 cakes grit soap at 3.45c and on 10,800 cakes grit soap at 2.75c.

Toilet Soap Award

Procter & Gamble Distributing Co., Dallas, Tex., was awarded the contract on 17,500 cakes toilet soap at 2.95c in a recent opening by the Army Quartermaster at Fort Sam Houston.

Metal Cleaner Award

Graham Industrial Supply Co., Lodi, N. J., was awarded the contract on 15,000 lbs. metal cleaner at 7.6c in a recent opening by the Army Quartermaster at Picatinny Arsenal, N. J.

Shaving Soap Bids

N. Brittingham & Sons, Philadelphia, submitted the low bid of 19.2c on 400 lbs. shaving soap in a recent opening by the Treasury Procurement Supply at Washington, D. C. In another opening, the same company bid low on 380 lbs. shaving soap at 19.4c.

Automobile Soap Bid

Davies-Young Soap Co., Dayton, O., submitted the low bid of 4.34c on 3200 lbs. automobile soap in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Laundry Soap Bids

Kay Tee Products Co., Brooklyn, bid low on 1200 lbs. packaged laundry soap at 11.35c in a recent opening by the Treasury Procurement Supply at Washington, D. C. At the same opening, Strunz & Sons Co., Pittsburgh, and Sterling Supply

Corp., Philadelphia, each bid low on 80,000 lbs. laundry soap at 5.79c.

Liquid Toilet Soap Bid

Harley Soap Co., Philadelphia, submitted the low bid of 18.1c on 11,000 gals. liquid toilet soap in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Army Laundry Soap Award

Colgate-Palmolive-Peet Co., Berkeley, Calif., was awarded the contract on 40,000 lbs. laundry soap at 3.36c in a recent opening by the U. S. Army Quartermaster at Fort Mason, Calif.

Toilet Soap Bid

J. Eavenson & Son, Camden, N. J., bid low on 11,000 lbs. toilet soap at 8.92c in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Hand Grit Soap Bid

Los Angeles Soap Co., Los Angeles, submitted the low bid of 5.75c on 667 lbs. hand grit soap in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Grit Soap Awards

Day & Frick, Philadelphia, were awarded the contracts on 100,000 cakes grit soap at 2.95c, and on 30,000 cakes grit soap at 1.9c in a recent opening by the Army Quartermaster at Brooklyn. At the same opening, S. B. Penick & Co., New York, was awarded the contract on 110 gals. insecticide concentrate at \$5.85.

Treasury Soap Bids

Kirkman & Son, Brooklyn, submitted the low bids of 5.8c on 120,150 lbs. laundry soap and 3.34c on 135,000 lbs. laundry soap in a recent opening by the Treasury Procurement Supply at Washington, D. C. At the same opening, Iowa Soap Co., Burlington, Iowa, bid low

on 6,300 lbs. toilet soap at 10c. In another opening by the same department, Stevens Soap Corp., Brooklyn, bid low on 12,000 lbs. scouring compound at 1.52c.

Jeffersonville Soap Bids

Colgate-Palmolive-Peet Co., Jersey City, N. J., submitted the low bid of 3.45c on 350,000 lbs. laundry soap in a recent opening by the U. S. Army Quartermaster at Jeffersonville, Ind. At the same opening, M. H. on 25,000 cakes grit soap at 2.97c. Fairchild & Bros., Chicago, bid low

Metal Polish Award

R. M. Hollingshead Corp., Camden, N. J., was awarded the contract on a quantity of metal polish at 7.52c per pt. in a recent opening by the U. S. Army Quartermaster at Ft. Mason, Calif.

Ammonia Water Bid

Sunlight Chemical Corp., submitted the low bid of \$422.24 on 1,632 bottles of ammonia water in a recent opening by the Veterans Administration Supply, Perry Point.

Naphthalene Award

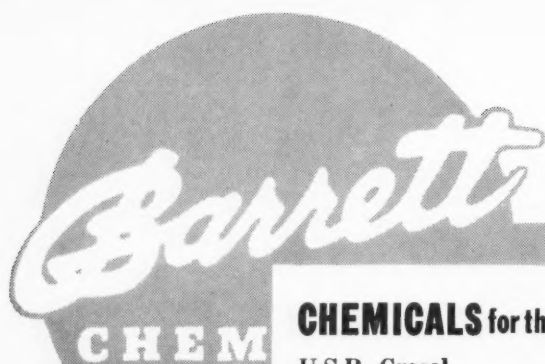
H. H. Rosenthal Co., New York, was awarded the contract on 20,000 lbs. flake naphthalene at 6.47c in a recent opening by the Army Quartermaster at Philadelphia.

Scouring Powder Bid

Imperial Products Co., Philadelphia, submitted the low bid of 2c in a recent opening by the Post Office Supply at Washington, D. C.

FTC Cites Bray Chemical Co.

The Federal Trade Commission recently issued a complaint against Bray Chemical Co., packer and distributor of cleansing compounds, Chicago. The company was charged with misrepresentation in the sale of a lye-product by claiming that a 6-ounce can of the preparation would make a hard soap when mixed with 6 pounds of grease. This claim is attacked by the commission.



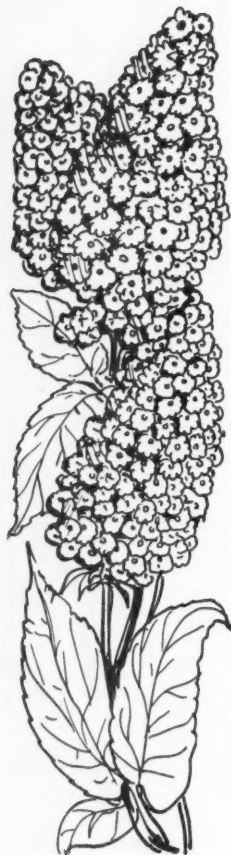
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NEW YORK, N. Y.

New Trade Marks

The following trade-marks were published in the March issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

CHELSEE—This in outline script letters within wreath describing soaps and soap products. Filed by Shulton, Inc., New York, May 26, 1939. Claims use since Feb. 15, 1934.

ALBIONITE—This in outline letters written vertically describing cleaning compounds. Filed by Albion & Sons, Cambridge, Mass., Aug. 24, 1939. Claims use since May 18, 1939.

SAVEX—This in fancy letters describing washing powder. Filed by Climalene Co., Canton, O., Dec. 6, 1939. Claims use since Oct. 1, 1913.

DAROLENE—This in solid letters describing water softener. Filed by Darco Corp., Canton, O., Nov. 20, 1939. Claims use since March 8, 1939.

RACING RED—This in solid letters describing shampoos and dentifrices. Filed by Delettrez, Inc., Long Island City, N. Y., Dec. 9, 1939. Claims use since Nov. 20, 1939.

SCREEN STAR—This in solid letters describing dentifrice. Filed by Mary Woodard Reinhardt and Mary H. McSweeney, New York, Dec. 22, 1939. Claims use since Aug. 4, 1938.

MYCOTRAZ—This in solid letters describing cleaner and polish. Filed by Masury-Young Co., Charleston, Mass., Jan. 5, 1940. Claims use since Sept. 15, 1939.

SILVER DIP—This in script letters written within disk of contrasting color, describing metal cleaner. Filed by Walter W. Miller Co., Indianapolis, Ind., April 11, 1938. Claims use since Feb. 23, 1938.

LANOKLEEN—This with

"LanO" in solid letters and "Kleen" in outline letters describing powdered hand soap. Filed by Lano Co., Chicago, Nov. 13, 1939. Claims use since Aug. 3, 1939.

CEDARINE—This is solid letters describing insecticides. Filed by O-Cedar Corp., Chicago, Oct. 23, 1939. Claims use since Oct. 10, 1939.

SLICK—This in script letters describing cleaning compound. Filed by the Glidden Co., Cleveland, Dec. 30, 1938. Claims use since July 5, 1935.

PINOCCHIO—This in solid letters describing toilet soap. Filed by Walt Disney Productions, Hollywood, Calif., Dec. 15, 1939. Claims use since Oct. 23, 1939.

WHITE NAVY—This in solid letters above drawing of sailor with semaphore flags. Filed by West Coast Soap Co., Oakland, Calif., Dec. 21, 1939. Claims use since 1935.

TWILL—This in solid letters describing soap and polish. Filed by George J. Praechtl, Buffalo, N. Y., Jan. 12, 1940. Claims use since Oct. 28, 1939.

DRESOLA—This in fancy letters describing soap. Filed by The Wella Corp., New York, Jan. 16, 1940. Claims use since Nov. 1, 1939.

RINSO—This in outline letters above drawing of woman hanging sheet on line describing soap. Filed by Lever Bros. Co., Cambridge, Mass., Jan. 20, 1940. Claims use since Sept. 7, 1937.

DRESOLA—This in fancy letters describing cleanser and water softener. Filed by Dresso Products, Fall River, Mass., Jan. 29, 1940. Claims use since Jan. 17, 1940.

PACE—This in heavy outline letters describing soap and soap preparations. Filed by Caled Products Co., Inc., Cottage City, Brentwood, Md., Jan. 30, 1940. Claims use since Jan. 3, 1940.

PESTROL—This in outline letters describing insecticide. Filed by Antrol Laboratories, Inc., Los An-

geles, Dec. 4, 1939. Claims use since Nov. 15, 1939.

VAMOOSE—This in outline letters describing insecticide. Filed by Cadie Chemical Products, Inc., New York, Jan. 10, 1940. Claims use since March 30, 1939.

BETAFORM—This in outline letters describing insecticides. Filed by C. B. Dolge Co., Westport, Conn., Jan. 12, 1940. Claims use since 1907.

LAX—This in outline letters describing floor dressing. Filed by Acme Chemical Co., Milwaukee, Jan. 25, 1940. Claims use since April 11, 1934.

BRUCE—This in black letters in white box surrounded by black vignette describing floor polishes. Filed by E. L. Bruce Co., Memphis, Tenn., Nov. 22, 1939. Claims use since Feb., 1932.

SAFARI—This in outline letters describing soap. Filed by Lehn & Fink Products Corp., Bloomfield, N. J., Jan. 16, 1940. Claims use since Sept. 12, 1939.

Trade Marks Granted

375,781. Window Cleaning Preparation. Chapman & Rodgers, Inc., Philadelphia. Filed October 12, 1939. Serial No. 424,463. Published December 19, 1939. Class 4.

375,850. Cleansing Compounds. HyLo Co., Houston, Tex. Filed July 24, 1939. Serial No. 421,881. Published December 26, 1939. Class 4.

375,883. Detergent. Cowles Detergent Co., Cleveland. Filed October 4, 1939. Serial No. 424,216. Published December 26, 1939. Class 4.

375,899. Portable Cleaning Machines. Trojan Products & Mfg. Co., Chicago. Filed October 9, 1939. Serial No. 424,354. Published December 26, 1939. Class 23.

375,939. Shaving Cream. The Armand Co., Des Moines, Iowa. Filed October 30, 1939. Serial No. 425,038. Published December 26, 1939. Class 4.

375,980. Insecticides and Disinfectants. Karwendel Gesellschaft Nachf. Rentschler & Cie., Laupheim/Wurttemberg, Germany. Filed July

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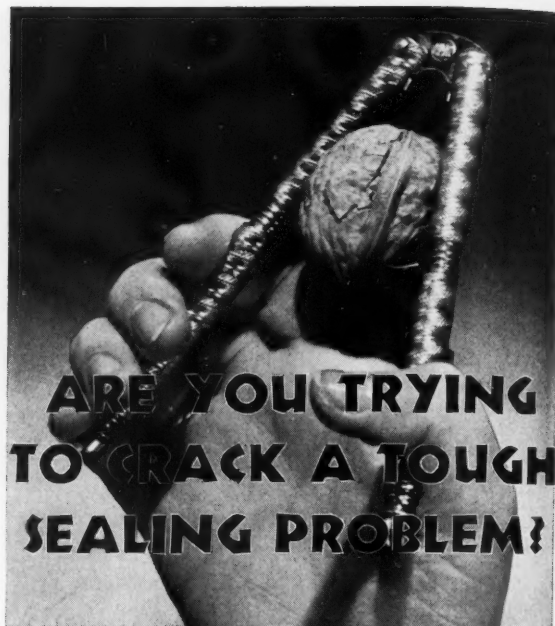
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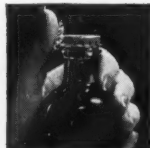
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you simply raise
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and press the
handy lever down

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KORK-N-SEAL
THE CAP WITH THE
HANDY LEVER



McCormick & Company uses KORK-N-SEAL on their gallon cans of famous Iron Glue. This package, by the way, won top award in the 1939 All-America Package Competition.

20, 1938. Serial No. 408,716. Published December 19, 1939. Class 6.

375,985. Germicidal Cleaning Compound. Protectol Co., Chicago. Filed October 3, 1938. Serial No. 411,244. Published December 20, 1938. Class 6.

375,989. Cleaning Preparation. Wright Chemical Co., Everett, Mass. Filed November 18, 1938. Serial No. 412,933. Published January 2, 1940. Class 4.

376,000. Stock Dips. Moorman Manufacturing Co., Quincy, Ill. Filed February 16, 1939. Serial No. 416,107. Published December 19, 1939. Class 6.

376,054. Shampoo. Seven Smith Brothers, Inc., Fair Haven, Vt. Filed August 14, 1939. Serial No. 422,602. Published December 26, 1939. Class 6.

376,061. Toilet Soap. Los Angeles Soap Co., Los Angeles. Filed August 23, 1939. Serial No. 422,903. Published January 2, 1940. Class 4.

376,103. Garbage Deodorant and Disinfectant. Sherco Products Corp., Syracuse, N. Y. Filed October 4, 1939. Serial No. 424,210. Published December 26, 1939. Class 6.

376,107. Polishing Compound. Timex Products Co., St. Louis. Filed October 6, 1939. Serial No. 424,282. Published January 2, 1940. Class 16.

376,178. Insecticidal Composition. Niagara Sprayer and Chemical Co., Middleport, N. Y. Filed October 11, 1939. Serial No. 424,439. Published December 26, 1939. Class 6.

376,169. Insecticides. Orville E. McKim, Port Chester, N. Y. Filed October 24, 1939. Serial No. 424,856. Published January 2, 1940. Class 6.

376,218. Tooth Powder. Ben-Hur Laboratories, Los Angeles. Filed November 6, 1939. Serial No. 425,274. Published December 19, 1939. Class 6.

376,222. Dentifrice. Nyal Co., Detroit. Filed November 6, 1939. Serial No. 425,296. Published December 19, 1939. Class 6.

376,223. Insecticides, Deodorants, and Disinfectants. Stanco Inc., Wilmington, Del. Filed November 6,

1939. Serial No. 425,309. Published January 2, 1940. Class 6.

376,281. Furniture Polish. Wesco Foods Co., Cincinnati. Filed August 29, 1936. Serial No. 382,732. Published January 9, 1940. Class 16.

376,356. Floor Sealer. Mobile Paint Manufacturing Co. of Delaware, Inc., Wilmington. Filed November 7, 1939. Serial No. 425,346. Published January 9, 1940. Class 16.

Soap in Rubber Moulding

An important use of ordinary sodium or potassium soaps in the rubber industry is as lubricants during the moulding of rubber articles. Many other materials have been used for the purpose but soap solutions prove very satisfactory. They cannot be applied evenly by brush, as is the practice in some small factories, and as a result, moulds require more frequent cleaning than they should. The only satisfactory method of lubrication with soap is to make up the solution to specified strength and feed it at high pressure through pipe-lines to the moulding shop, where each operator is supplied with a spray gun.

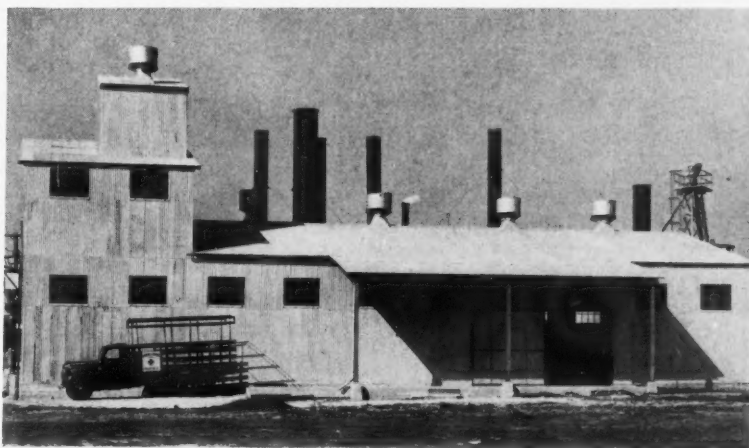
Evaluation of suitable soaps is not an easy matter since there is no literature on the subject. Ultimate reliance must be placed on reports from operators and factory foremen, but they have proved of

little value as entirely different reports have been given by different operators on the same solution and by the same operator at different times. With the increasing use of aluminum and its alloys for the manufacture of moulds, the use of a soap containing free alkali is obviously unsatisfactory and may lead to porosity of the mould surface.

A series of experiments on soaps using sodium and potassium stearates and oleates in distilled water, showed that the harder soaps were more effective than the soft ones. However, there is need for a more exact method of evaluating lubricants, preferably under laboratory test conditions.

One point that must be guarded against, especially when using soap solutions in pressure pipe lines, is their tendency to gel on standing. Strengths normally used in the rubber industry vary from 1.5 to 4 per cent and many soaps submitted as suitable lubricant types will gel at these concentrations on standing overnight at 60-65°F. This tendency can be overcome by the use of cyclohexanol. Using a 2.5 per cent soap-flake solution and varying the amount of cyclohexanol, 0.5 per cent of the latter was found to be satisfactory. If lower temperatures are encountered a higher proportion may be necessary. T. L. Garner. *Chem. Age* 42, 111 (1940).

A. R. Maas Chemical Co., Los Angeles, went into production last month at their new plant, South Gate, Cal., for manufacture of tetrasodium pyrophosphate, giving soapers a west coast source for "Pyro."



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Raw Material Markets

As of March 27, 1940

NEW YORK — Prices of oils and fats continued their downward tendency this period, with such important soap making raw materials as coconut oil, tallow, red oil, stearic acid and grease all being quoted lower. The major exceptions to the downward trend were noted in corn oil and linseed oil. In the perfuming materials market the trend was mixed. On some oils supplies are reported scarce, both in the American market and abroad. There is the added factor of increasing costs of shipment, including higher freight, insurance and brokerage rates. In some cases these increases have offset the effect of lower quotations from primary markets. The chemical market continued quiet.

CHEMICALS

Acetone

Producers have announced an advance of half a cent per pound in the price of acetone effective April 1.

Naphthalene

The market for refined naphthalene was reported quiet early in the period, with the seasonal movement delayed by the late Spring. Reports were received of an advance of 10 cents per 100 lbs. in the price of imported crude early in the month. Late in the month a serious fire at the plant of an important producer of refined naphthalene resulted in heavy loss of stocks. What effect, if any, this may have on the market is not yet apparent. It was stated that deliveries would not be interfered with.

Pyrethrum

Reports from primary markets indicate a somewhat lower level of replacement costs on pyrethrum flowers. There has been but little effect on quotations as yet, as sellers for the most part have quite heavy stocks of flowers bought at higher levels which will have to be absorbed before price

reductions of consequence can be expected. Imports of pyrethrum flowers during January totaled 1,234,069 pounds, valued at \$322,148. The average import figure for 1939 was in the neighborhood of 1,100,000 pounds per month.

OILS AND FATS

Coconut Oil

In a quiet market the quotation on Manila tanks of coconut oil at New York was dropped to $3\frac{1}{8}$ cents per pound this period, one-quarter of a cent under the quotation of a month ago. Copra quotations on the coast were fractionally lower.

Cotton Oil

Quotations on both crude and refined cottonseed oil were lower this period, the drop paralleling the decline in the lard market.

Linseed Oil

Quotations advanced almost a cent a pound on linseed oil this period, with an active demand reported for flax. This gain in price came in the face of reports that 2,836,000 acres would be planted to flax by American farmers this year, as compared with 2,023,000 acres last season.

Soybean Oil

In company with competing oils, soybean dropped a quarter of a cent this period to be quoted currently at 6 cents for crude tanks. Acreage under cultivation for this year's crop was reported on March 1 to be 18 per cent over the 1939 figure.

Tallow

In the face of slackened interest on the part of buyers, tallow quotations dropped a half cent per pound this period. The current quotation is $43\frac{3}{4}$ cents per pound for city extra.

PERFUMING MATERIALS

Anise Oil

Quotations dropped 4 cents per pound this period to the present range of 68 to 70 cents.

Bergamot Oil

An advance of 75 cents per pound came in the price of bergamot oil late this period, lifting the level of quotations to a range of \$5.00 to \$5.50. This rise was accompanied by advances in all the other Italian citrous oils, and may be an attempt to play on the short American crop of oranges and lemons. As yet American quotations on lemon and orange oils have not changed.

Bois de Rose Oil

Bois de rose was advanced 5 cents per pound this period to a basis of \$1.65 to \$1.75 per pound.

Cananga Oil

Both crude and rectified grades were lowered in price this period, the reduction being occasioned by lack of demand.

Cedarleaf Oil

Cedarleaf oil dropped 10 cents a pound this period to be quoted currently at 90 cents.

Clove Oil

Competition on this oil resulted in a price reduction by some sellers this period, the new inside price being \$1.20 per pound.

— ♦ —
The United States soap industry is now being covered by the U. S. Bureau of Census as a part of the biennial Census of Manufactures whose purpose is to obtain an up-to-date statistical picture of the industry's operations. The schedules, which are being filled out by soap manufacturers, cover not only production of soaps and allied products, but employment, pay roll, costs, inventories and other phases of manufacturing operations on which facts may prove of value. The last such census, conducted for the year 1937, listed volume of production and corresponding values for the complete line of soap products.



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Soaps, Oil Soaps, Pine Scrub and Automobile Soap.

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Raw Material Prices

(As of March 27, 1940)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P. drums	lb.	\$.07½	\$.08
Acid, Boric, bbls., 99½%	ton	106.00	138.00
Cresylic, drums	gal.	.68	.70
Low boiling grade	gal.	.68	.70
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.10%	.12
Adeps Lanae, hydrous, bbls.	lb.	.29	.30
Anhydrous, bbls.	lb.	.30	.31
Alcohol, Ethyl, U.S.P., bbls.	gal.	4.55	4.58½
Complete Denat., SD 1, drums, ex. gal.	gal.	.28½	.30½
Alum. Potash lump	lb.	.04	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	—
Bentonite, 1, works	ton	—	16.00
Bentonite, 2, works	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.00	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	1.10
L. C. L.	gal.	.73	1.17
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U.S.P., drums	lb.	.09%	.10¼
Cresote Oil	gal.	.13½	.14½
Feldspar, works	ton	32.00	35.00
(200 to 325 mesh)			
Formaldehyde, bbls.	lb.	.05%	.06¼
Fullers Earth	ton	15.00	—
Glycerine, C. P., drums	lb.	.12½	.13
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.08%	.09
Soap, lye, drums	lb.	.07%	.08¼
Hexalin, drums	lb.	.80	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs	lb.	2.04	2.19
Naphthalene, ref. flakes, bbls.	lb.	.06%	.07
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorobenzene, bbls., kegs	lb.	.12½	.15¼
Petrolatum, bbls. (as to color)	lb.	.04	.07½
Phenol (Carbolic Acid), drums	lb.	.13	.13%
Pine Oils, bbls.	gal.	.53	.59
Potash, Caustic, solid	lb.	.06¼	.06%
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03½	.03%
Potassium Carbonate, solid	lb.	.06½	.06%
Liquid	lb.	.03	.03½
Pumice Stone, powder	100 lb.	3.50	4.50
Rosins (600 lb. bbls. gross for net)—			
Grade D to H, basis 280 lbs.	bbl.	6.10	6.80
Grade K to N	bbl.	6.85	6.90
Grade WG to X	bbl.	6.97	7.45
Wood	bbl.	4.75	6.50
Rotten Stone, pwd. bbls.	lb.	.08½	.10
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04%	.04½
Olive Castile, bars	lb.	.17	—
Olive Castile, powder	lb.	.26	.30
Powdered White, Neutral	lb.	.19	.22
Olive Oil Foot, bars, 68-70%	lb.	.11	—
Green, U.S.P.	lb.	.09	—
Tallow Chips, 88%	lb.	.08¼	—
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.10	1.35
Car lots, in bulk	100 lb.	.95	—

Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.75	—
Liquid, tanks, 47-49%	100 lb.	1.95	—
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07	.08¼
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	3.75	4.80
Crystalline	100 lb.	2.35	3.35
Sodium Pyrophosphate	100 lb.	5.10	5.55
Potash Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.28
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	lb.	.022	.028
Zinc Oxide, lead free	lb.	.06½	.07%

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.06½	—
Castor, No. 1, bbls.	lb.	.13%	.14
No. 3, bbls.	lb.	.12%	.13½
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.03½	—
Tanks, Pacific Coast, futures	lb.	.02%	—
Copra, bulk, coast	lb.	.0170	.0172
Corn, tanks, mills	lb.	.06¼	.06%
Cottonseed, crude, tanks, mill	lb.	.05%	Nom.
PSY, futures	lb.	.065%	.06%
Fatty Acids, Chicago			
Corn Oil, tanks	lb.	.09	.09¼
Coconut Oil, tanks	lb.	.10	.10%
Cotton Oil, tanks	lb.	.08½	.08%
Settled soap stock	lb.	.03	.03¼
Boiled soap stock, 65%	lb.	.04	.04%
Foots, 50%	lb.	.01¼	.01%
Red Oil, bbls., dist. or sapon.	lb.	.08	.09
Tanks	lb.	.07½	—
Stearic Acid,			
Double pressed	lb.	.11¼	.12¼
Triple pressed	lb.	.14	.15
Greases, choice white, bbls.	lb.	.05½	.05¼
Yellow	lb.	.04%	.04%
Lard, city	lb.	.06	.06¼
Linseed, raw, bbls.	lb.	.1080	.1100
Tanks, raw	lb.	.1020	.1040
Olive, denatured, bbls., N. Y.	gal.	.95	.96
Foots, bbls., N. Y.	lb.	.08%	—
Palm, shipment	lb.	.04	—
Palm, Kernel, shipment	lb.	No Prices	
Soya Bean, domestic, tanks, crude	lb.	.06	Nom.
Stearine, oleo, bbls.	lb.	.06¼	.06½
Tallow, special, f.o.b. plant	lb.	.04%	—
City, ex. loose, f.o.b. plant	lb.	.04%	—
Teased Oil, crude	lb.	.12	Nom
Whale, refined	lb.	.0910	—



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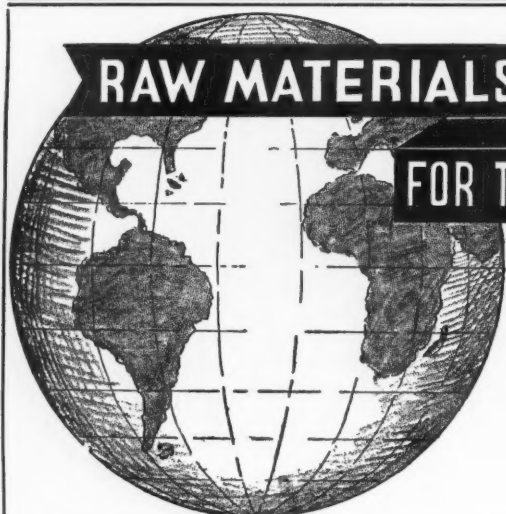
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Plant and Laboratories . . . Bayonne, N. J.



RAW MATERIALS

1838-1940

FOR THE SOAP INDUSTRY

Oils Fats
Chemicals
Fatty Acids
White Mineral Oils
Petrolatums

FROM ALL PARTS OF THE WORLD

Mineral Oils

Petrolatums

Fatty Alcohols

Special Fatty Acids

Castor Oil
Cocanut Oil
Corn Oil
Cottonseed Oil
Palm Oil
Palm Kernel Oil
Olive Oil

Olive Oil Foots
Peanut Oil
Perilla Oil
Rapeseed Oil
Sesame Oil
Soya Bean Oil
Teaseed Oil

Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein
Tallow

Grease
Lanolin
Caustic Soda
Soda Ash
Caustic Potash
Carbonate Potash
Sal Soda

Modified Soda
Silicate Soda
Metasilicate
Tri Sodium Phosphate
Di Sodium Phosphate
Chlorophyll
Superfating Agent

WELCH, HOLME & CLARK CO., Inc.
563 GREENWICH STREET ESTABLISHED 1838 NEW YORK CITY

(As of March 27, 1940)

Essential Oils

Almond, Bitter, U.S.P.	lb.	\$2.00	\$2.10
Bitter, F. F. P. A.	lb.	2.10	2.20
Sweet, cans	lb.	.85	.90
Anise, cans, U.S.P.	lb.	.68	.70
Bay, tins	lb.	1.20	1.35
Bergamot, coppers	lb.	5.00	5.50
Artificial	lb.	1.25	1.30
Birch Tar, rect. tins	lb.	.75	.80
Crude, tins	lb.	.25	.26
Bois de Rose, Brazilian	lb.	1.65	1.75
Cayenne	lb.	1.50	1.75
Cade, cans	lb.	.55	.60
Cajeput, native, tins	lb.	.61	.62
Calamus, tins	lb.	8.25	8.50
Camphor, Sassy, drums	lb.	.36	.37
White, drums	lb.	.50	Nom.
Cananga, native, tins	lb.	1.60	1.65
Rectified, tins	lb.	1.85	2.00
Caraway Seed	lb.	3.00	3.25
Cassia, Redistilled, U.S.P.	lb.	1.30	1.35
Cedar Leaf, tins	lb.	.90	.95
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.39	.40
Citronella, Ceylon, drums	lb.	.40	.41
Clove, U.S.P., tins	lb.	1.20	1.25
Eucalyptus, Austl., U.S.P., cans	lb.	.69	.72
Fennel, U.S.P., tins	lb.	2.25	2.50
Geranium, African, cans	lb.	2.75	3.10
Bourbon, tins	lb.	2.40	3.10
Turkish	lb.	2.25	2.50
Hemlock, tins	lb.	1.00	1.25
Lavender, U.S.P., cans	lb.	2.50	5.30
Spike, Spanish, cans	lb.	1.20	1.25
Lemon, Ital, U.S.P.	lb.	3.75	4.50
Cal.	lb.	3.00	—
Lemongrass, native, cans	lb.	.70	.73
Linaloe, Mex., cases	lb.	1.50	1.60
Nutmeg, U.S.P., tins	lb.	1.90	1.95
Orange, Sweet, W. Ind., tins	lb.	2.20	2.30
Italian cop	lb.	3.80	5.00
Distilled	lb.	.90	—
California	lb.	1.60	—
Origanum, cans, tech.	lb.	1.10	1.65
Patchouli	lb.	4.60	7.00
Pennyroyal, dom.	lb.	3.00	Nom.
Imported	lb.	2.75	2.80
Peppermint, nat., cans	lb.	2.75	3.00
Redis., U.S.P., cans	lb.	3.00	3.25
Petitgrain, S. A., tins	lb.	1.55	1.60
Pine Needle, Siberian	lb.	1.20	1.25
Rosemary, Spanish, tins	lb.	.75	.80
drums	lb.	.70	.75
Sandalwood, E. Ind., U.S.P.	lb.	5.25	5.50
Sassafras, U.S.P.	lb.	1.20	1.25
Artificial, drums	lb.	.70	.72
Spearmint, U.S.P.	lb.	2.20	2.25
Thyme, red, U.S.P.	lb.	.80	1.75
White, U.S.P.	lb.	.90	1.95
Vetivert, Bourbon	lb.	3.50	15.00
Ylang Ylang, Bourbon	lb.	5.75	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.60	—
Amyl Cinnamic Aldehyde	lb.	2.00	\$2.25
Anethol	lb.	1.05	1.15
Benzaldehyde, tech.	lb.	.55	.60
U.S.P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.40	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.60	1.85
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	2.75	4.65
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.75	.80
Eugenol, U.S.P.	lb.	2.25	3.30
Geraniol, Domestic	lb.	.60	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	3.00	3.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	oz.	2.00	2.13
Ionone	lb.	2.50	4.15
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	2.10	3.30
Linalyl Acetate	lb.	2.00	3.00
Menthol	lb.	3.60	—
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.25
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.37
Musk Ambrette	lb.	3.65	3.95
Ketone	lb.	3.70	4.10
Xylene	lb.	1.05	1.20
Phenylacetaldehyde	lb.	2.10	2.50
Phenylacetic Acid	lb.	1.75	3.00
Phenylethyl Alcohol	lb.	2.50	3.35
Rhodinol	lb.	5.55	10.80
Safrol	lb.	.70	.75
Terpineol, C. P., 1000 lb. drs.	lb.	.25	—
Cans	lb.	.28	—
Terpinyl Acetate, 25 lb. cans.	lb.	.82	.85
Thymol, U.S.P.	lb.	1.55	1.60
Vanillin, U.S.P.	lb.	2.50	2.65
Yara Yara	lb.	1.25	1.55

Insecticide Materials

Insect Powder, bbls.	lb.	.32	.34
Pyrethrum Extract			
5 to 1	gal.	1.65	1.80
20 to 1	gal.	6.20	6.40
30 to 1	gal.	9.20	9.50
Derris, powder—4%	lb.	.18	.21
Derris, powder—5%	lb.	.23	.26
Cube, powder—4%	lb.	.17	.20
Cube, powder—5%	lb.	.22	.25

Gums

Arabic, Amb. Sts.	lb.	.12½	.12%
White, powdered	lb.	.16½	.18%
Karaya, powdered No. 1	lb.	.14	.23
Tragacanth, Aleppo, No. 1	lb.	2.65	2.70
Flake	lb.	No Prices	

Waxes

Bees, white	lb.	.38	.39
African, bgs.	lb.	.26	.27
Refined, yel.	lb.	.31	.36
Candelilla, bgs.	lb.	.18	.18½
Carnauba, No. 1	lb.	.75	.77
No. 2, N. C.	lb.	.56	.57
No. 3, Chalky	lb.	.52	.53
Ceresin, yellow	lb.	.12½	.14
Paraffin, ref., 125-130	lb.	.0675	.0680

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Keeping Qualities..

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Standard Silicate will improve the keeping qualities of your soaps. A small percentage of Standard Silicate in the crutcher prevents darkening of white soaps and retards development of rancidity. There are many other advantages in the use of Standard Sodium Silicates—write for technical information.

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S-2

Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Soap Definitions Revised

COMMITTEE D-12, soap specification committee of the American Society for Testing Materials, reported considerable progress in its work of soap standardization, testing and definition at a meeting held March 11th and 12th at the Hotel New Yorker, New York City. At the two-day session presided over by Chairman H. P. Trevithick the principal developments were a series of revisions in previous definitions for soap terms, new tentative specifications for pure and blended palm oil and olive oil soaps and new tentative specifications for tetrasodium pyrophosphate and sodium sesquisulfate.

The sub-committee on definitions in a report presented by Charles A. Marlies, chairman, recommended that all previously accepted definitions be withdrawn and that their revised substitutes be published as tentative for the coming year. Changes in previous definitions were suggested as follows:

- (a) Replace the definition for Alkaline Detergent by:

Alkali Detergent—A water-soluble alkali having detergent properties.

- (b) Replace the definition for Break Soap Powder by:

Detergent Soap Powder—A mixture of soap and one or more alkaline builders and containing 25 to 50 per cent of anhydrous soap.

- (c) Revise Definition for Builder as follows:

Builder—Any material added to soap to improve its effectiveness under the conditions of use.

- (d) Replace the definition for Built Soap by:

Built Soap—A mixture of not less than 50 per cent anhydrous soap with one or more alkaline builders.

- (e) Withdraw definition for *Scouring*.

- (f) Change title of definition for Soapy Alkaline Detergent to: *Soapy Alkali Detergent*.

- (g) Definition for Washing revised as follows:

Washing—A process of cleaning in (liquid) aqueous medium.

New definitions recommended for publication as tentative included the following:

Soap—The product formed by the saponification or neutralization of fats, oils, waxes, rosins, or their acids with organic or inorganic bases.

Note: Various descriptive adjectives are applied to the name soap to indicate:

Method of manufacture, e.g. boiled soap, cold-process soap.

Physical form, e.g. bar soap, chip soap, liquid soap, powdered soap.

A special physical property, e.g. floating soap, low titer soap, milled soap, soft soap.

A particular ingredient, e.g. grit soap, tar soap.

A particular use, e.g. automobile soap, dry cleaning soap, salt water soap.

Anhydrous Soap Content—Amount of true soap.

Blended (Palm Oil) Soap—A soap in which at least 51 per cent but not all of the fatty acid stock is from the source named (palm oil).

Filler—A material added to a soap or other detergent which does not improve its attractiveness or its effectiveness under the conditions of use.

Pure (Palm Oil) Soap—A soap in which the fatty acid stock is solely from the source named (palm oil).

Straight Soap—Commercially pure soap in which the sum of free alkali, total matter insoluble in alcohol and sodium chloride is no more than 4 per cent.

The new proposed tentative specification for Palm Oil Solid Soap, as presented by C. L. Nutting provides for two types,—pure and blended.

The pure soap—Type A—is to be made from pure palm oil and soda. Type B—blended—may have other oils blended with the palm oil, but the mixture shall consist of no less than 51 per cent palm oil.

The tentative specification for Palm Chip Soap was adopted without important change. It was suggested that rather than adopting two

types—pure and blended—as for solid palm oil soap, it would be better to consider blends as covered by the “Chip Soap” standard.

The matter of a specification for Olive Oil Solid Soap was considered and a tentative standard was recommended in the same form as for Palm Oil Solid Soap, with two types, A and B, specified. The titre of mixed fatty acids was set at 18.25 and the iodine number at 79.95 in the new olive oil soap specification. In other particulars the chemical requirements for Olive Oil Solid Soap were the same as for Palm Oil Solid Soap. A specification for Olive Oil Chip Soap was discussed briefly and it was decided to try to arrive at an appropriate form by letter prior to the next meeting of the committee.

The advisability of including an “Unsaponifiable Content” specification into the several soap specifications was discussed. It was felt that this item might be eliminated if the procedure for determining “Total Anhydrous Soap” were suitably amended. It was suggested that paragraph (b), 3rd sentence, might be amended to read—“This naturally includes any mineral oil and neutral fat which if present should be deter-

mined separately and deducted from the result to obtain the true soap.” However it was finally decided in the general meeting that this subject must be further considered by both the Specifications and Methods Committees.

In addition to attempting to conclude the drafting of an Olive Oil Chip Soap and settling the question of a specification for “unsaponifiable content” it was suggested that future work of the Committee might include specifications for “Low Titre Soap,” “Potash Soap,” and “Fig Soap.”

In the tentative specification for tetrasodium pyrophosphate, the

committee headed by C. C. Ziegler fixed the following requirements for chemical composition: tetrasodium pyrophosphate, calculated as $\text{Na}_4\text{P}_2\text{O}_7$, minimum 97.5 per cent; water insoluble matter, maximum, 0.20 per cent.

For sodium sesquisilicate the following chemical composition was specified: sodium sesquisilicate calculated as $3\text{Na}_2\text{O} \cdot 2\text{SiO}_2 \cdot 11\text{H}_2\text{O}$, minimum 97 per cent; total alkalinity as Na_2O , to methyl orange, minimum 35.5 per cent, maximum 37.5 per cent; total silica as SiO_2 , minimum 22.5 per cent; matter insoluble in water, maximum 0.2 per cent.

Chemical Requirements for Palm Oil Solid Soap

	TYPE A	TYPE B
Moisture and matter volatile at 105 C. max. per cent	35*	35*
Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride, max. per cent.	3.0	3.0
Free alkali, calculated as NaOH max. per cent.	0.3	0.3
Free acid, calculated as oleic acid max. per cent.	0.2	0.2
Matter insoluble in water max. per cent.	0.7	0.7
Titre of mixed fatty acids prepared from the soap, min.	43 C.	**
Anhydrous soap, min. per cent.	61	61

* Deliveries which yield more than 35 per cent volatile matter shall be rejected without further test.

** As agreed upon between buyer and seller.



Uses of Tallol Soaps

TALL oil or tallol contains in addition to unsaponifiable matter, of about 50 per cent fatty acids and 40 per cent rosin acids. In the fatty-acid mixture oleic acid, linoleic, linolenic, ricinoleic and palmitic acid have been detected. Like the rosin acids, they occur partially in the form of esters or polymerized products. The unsaponifiable part of the material is composed of phytosterol and hydrocarbons.

Tall oil is converted with caustic alkali and with ammonium hydroxide to dark-colored paste soaps which give clear solutions in water. The soft consistency of these soaps is due principally to the high content of rosin acids. For this reason it is necessary to combine tall oil with hard fatty acids in making soap. For saponification, about 35 per cent of caustic potash is needed based on the weight of tall oil. If the soap can be used where odor of tall oil is not objectionable, the oil can be used alone without the addition of other fatty acids.

Tall oil soaps have very good emulsifying and dispersing action, wetting power, strong lathering power, all of which give them exceptional detergent value. Dispersing action of tall-oil soaps is increased if some of the substance to be dispersed is treated with the tall oil before dilution. A further increase in dispersing power can be made by the addition of small amounts of alcohol. In this way very difficultly dispersed substances such as petroleum and paraffin oil can be prepared as stable emulsions. Also water-soluble dyes, particularly vat dyes, can be dispersed well with the aid of tall-oil soaps.

Tall-oil soaps, where the odor is not objectionable, are applicable in the textile industry. Because of their strong detergent action, they are efficient for washing wool, espe-

cially for the scouring of the crude fibers. Tall-oil soaps seem to have superiority over other soaps in wool scouring, perhaps because complete defatting is to be avoided for the protection of the wool in subsequent treatment. They can replace the usual soaps in all washing processes. Although the soap solution is dark in color, it does not appear to darken white goods washed in it. The good wetting action makes it suitable for steeping cotton, when the emulsifying action also disperses the cotton wax. This applies more particularly to open boiling, as fatty-acid condensation products give better results with pressure boiling. Tall-oil soaps are applicable in all dyeing processes including the leveling and stripping of dyes. Their dispersing action makes them exceptional agents in oil treatment, particularly with linseed oil. In this respect they show some advantages in comparison with addition of fat solvents. They may be used in place of other soaps for the degumming of silk. Under some conditions, they give better results than Marseilles soap.

There are some uses for which tall-oil soaps are inadvisable. They should not be added to chlorine bleach as they are easily oxidized and thus diminish the efficiency of bleaching. Also the chlorine odor is increased when these soaps are added to the bleach. A corresponding condition exists in peroxide bleaches, where the amount of oxygen required in the presence of tall-oil soap is increased up to 50 per cent. Tall-oil soaps also have the same disadvantage of ordinary soaps in not being resistant to hard water. Hans-Joachim Henk. *Seifensieder-Ztg.* 67, 22 (1940).

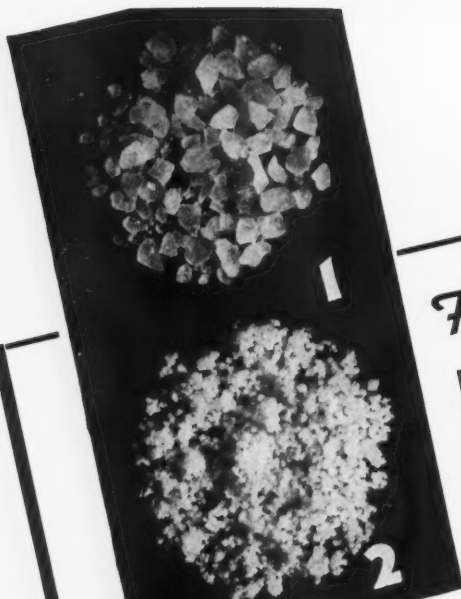
Some recent work on the oxidation of rosin has shown that when French and American rosins are treated with potassium permanganate

in alkaline solution, oxalic acid is quantitatively produced in the proportion of 0.9 molecule of oxalic acid per molecule of abietic acid, $C_{20}H_{30}O_2$. The oxidation is carried out by dissolving about 1 gram of rosin in 100 cc. of 1 per cent potassium hydroxide solution, adding 5 grams of potassium permanganate and 3 grams of potassium hydroxide, dissolved in 300 cc. of water, and heating on a water bath for 2 hours. Neutralize with 10 per cent sulfuric acid, filter and titrate the filtrate with 0.1 normal potassium permanganate solution. It has been suggested that this may serve as a basis for a new method for determining rosin in soap. A preliminary examination of the procedure has proved rather encouraging. *Perfumery & Essential Oil Record* 31, 72 (1940).

Detergents for Mixed Goods

The cleansing of fibers from fat, sooty particles and protein matter is one of the oldest and most important problems in the textile industry. In the last few years much progress has been made, particularly in washing wool and wool-rayon mixtures. Rayon today occupies a very important position in the textile industry and is not looked on so much as a substitute but as a very useful and versatile fiber. It is used alone in woven fabrics and in combination with wool, cotton and linen.

Although soap maintains its place as a detergent for most textile materials, the new synthetic agents are particularly applicable in the washing of wool and wool-rayon mixes. In choosing among the many products, one has to consider the amount of dust, rust, colored and other types of soil that will be encountered. The nature of the electric charge on the soiled particles and on the material is also important. Wool carries a positive charge so that nega-



1. **METSO GRANULAR.** Sodium Metasilicate, granulated product.
2. **METSO CRYSTALS.** Purest form of Sodium Metasilicate. Uniformly sized crystals.
3. **METSO FINES.** Sodium Metasilicate, finely powdered.
4. **METSO 99.** Pure Sodium Sesquisilicate.
5. **METSO 22.** Integral combination containing Sodium Metasilicate.
6. **METSO 66.** Special Metasilicate cleaner for metals.

U. S. Pat. 1898707
U. S. Pat. 1948730

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tively charged soil such as inorganic matter, becomes more difficult to remove. The particular value of soda ash in washing is its attack on free fatty acids, which are apt to be present in the soil on wool. Nonionizing compounds are most useful in acid baths. Light wool piece goods and wool-rayon mixes should be washed at the lowest possible temperature and for the shortest possible time.

If piece goods have been stored for some time, the fatty matter present may have been changed to oxy acids. For this type of cleaning a synthetic detergent containing an organic solvent is very efficient. The fat solvent attacks and softens any resinous film so that the detergent can emulsify it and remove it from the fabric. A. Foulon. *Seifensieder-Ztg.* **67**, 2-3, 12-13 (1940).

Iron Contamination

The ill effects of minute amounts of copper, iron or other metal in soap is well known, as well as the liability of such contaminants to act catalytically in the oxidation of the soap, with the formation of dark spots and development of rancidity. The introduction of nickel-lined pans and other precautions have been taken to prevent this. However, it is of little use to ensure the freedom of the freshly boiled soap from the presence of metals, if the same freedom cannot be maintained in subsequent treatments.

The modern methods of rapid drying unfortunately involve much greater risk than the old method of drying in frames. Exposure of the soap on metal bands in a chamber where particles of metal may be caught up in the air currents and deposited on the soap is fraught with danger unless the utmost care is taken. The travelling band should be made of noncorrodible metal, and if possible all other metal parts of the drying chamber also. In the case of toilet soaps there is further danger of contamination on the mill or in the plodder with the possibility of reaction between the metal and the perfume or medicament added to the soap, e.g., the color reaction between iron and a phenol whether the latter

is derived from eugenol or other essential oil, or from cresylic acid. *Perfumery & Essential Oil Record* **31**, 73 (1940).

Paraffin Fatty Acids

Improvements have been made in the technique of obtaining fatty acids suitable for soap making from paraffin hydrocarbons. Oxidation of the hydrocarbons is effected in the liquid phase at the lowest practicable temperature, which ranges between 80 and 120° C., and in the presence of catalyst mixtures which are selected for their activity at these temperatures. The catalyst is mixed with the melted hydrocarbons, which are then treated with a very fine jet of air, when oxidation sets in. As soon as the saponification value reaches a certain figure, ranging between 100 and 200 according to the type of hydrocarbons, oxidation is interrupted and the mass expelled from the reaction chamber by means of compressed air.

The mixture is composed of fatty acids and oxy acids and also contains a proportion of unchanged hydrocarbons. The mass is agitated with a caustic alkali, when an upper layer of soap solution and a lower layer of unsaponifiable matter form, with some unsaponifiable in the upper layer. To separate this the aqueous soap solution may be treated in countercurrent at 60-80° C. with a solvent consisting mainly of butyl and propyl alcohols and certain petrol fractions; or the whole mass may be distilled at a temperature varying between 300 and 400° C., when the unsaponifiable matter distills over. It is possible to obtain a product containing less than 1 per cent of unsaponifiable matter and with an odor considerably improved as a result of distillation.

The crude soap mixture is not of satisfactory quality, and is decomposed by mineral acid and the fatty acids purified by distillation in a modern vacuum still. The yield of soap-making fatty acids is 50-80 per cent of the total distilled material. G. Genin. *La Parfumerie Moderne*; through Manufacturing Chemist **11**, 20 (1940).

Soap Adsorption

Using an 80 per cent tallow-20 per cent coconut oil soda soap, various adsorption tests were made. The following table shows the adsorption of soap from solution by various types of fabrics:

Fabric	% Soap Adsorbed from a 0.1 Soap Solution
Cotton	19.5
Rayon	7.6
Silk	11.1
Wool	60.0

It was found that the adsorption of soap by cotton is a function of the initial concentration of the soap solution. The percentage adsorption of soap from solution is somewhat greater at lower concentrations than at higher concentrations. Adsorption also is a function of temperature, the maximum adsorption occurring at about 55° C. (130° F.). This is probably related to the forms of soap in equilibrium at the particular temperature. When pure single-component soaps were used, the adsorption of sodium laurate was only one-third that of the C₁₄, C₁₆, and C₁₈ soaps. E. W. Colt and C. V. Snell. *Oil & Soap* **17**, 33-8 (1940).

Wax Alcohols in Shave Soap

To improve the emollient properties of toilet and shaving soaps and increase lather stability, such wax alcohols as cetyl, oleyl and stearyl alcohols may be incorporated, the latter possibly being the most satisfactory. From 1 to 2 per cent of the alcohol may be milled into the soap. Its presence is said to improve gloss and to aid in fixing perfumes. *Am. Perfumer*, **40**, No. 2, 58 (1940).

Noncrystallizing Resin

A noncrystallizing resin is produced suitable for use in soaps, sizings, etc., by a method which involves permitting normal pine oleoresin to undergo substantially maximum crystallization, then filtering out the crystals, recovering the filtrate, and removing volatile oils from it by steam distillation. S. Pal-kin and W. C. Smith, to the people for free use. U. S. Patent No. 2,176,660.

The Modern Way to Sample Perfumes and Toilet Soaps



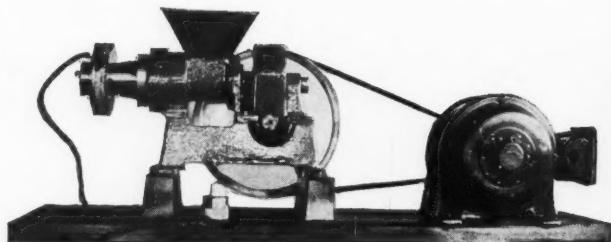
Tiny cakes of fragrant soap serve to sample the season's odors for many of the leading perfumers. Makers of toilet soaps also use them to sample their products.

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Nature of Unsaponifiable

Petroleum ether quickly extracts the hydrocarbons from alcoholic soap solutions, while sterols are extracted less easily. This leads to the development of new characteristics for the unsaponifiable matter of fats. The weighed unsaponifiable matter of a fat, 5 grams of a fatty acid, 20 cc. of 95 per cent alcohol, and 3 cc. of KOH (sp. gr. 1.5) are refluxed 5 minutes and cooled. Fifty cc. of petroleum ether boiling at 60-70° and 20 cc. of water are added and the charge is stoppered and vigorously shaken. The residue from 25 cc. of solvent is determined. If palmitic acid was the fatty acid used the characteristic is called "palmitate hydrocarbon value", which equals 100 (50/25) (wt. of residue/wt. of unsaponifiable). With the use of oleic acid in the determination the characteristic is called "oleate hydrocarbon value". The relative amounts of sterols and hydrocarbons in mixtures can be calculated with the use of this characteristic and the above data. J. Grossfeld. *Z. Untersuch. Lebensm.* 78, 273-85.

Rug and Carpet Cleaners

(From Page 33)

phosphates or other weak alkalies, such as sodium sesquicarbonate. Igepon T. (the sodium salt of amino ethyl sulphonic acid) is also used, usually in the presence of a weak alcoholic solution of acetic acid.

Some of the latest synthetic detergents which give working solutions with neutral reactions, pH 6.8 to 7.0 are being used for *en situ* machine cleaning. They are chemically neutral, do not turn rancid, oxidize or hydrolyze even in very dilute solutions. Like the fatty alcohols, they do not precipitate calcium and magnesium salts and may be used with equal success in both cold and hot solutions.

It has been suggested that sodium sulfamate and ammonium sulfamate would be useful additives to machine carpet washing solutions, and some experiments are being undertaken to ascertain their usefulness in conjunction with sulfated fatty al-

cohols and mixtures of the alcohols and straight sulfonated oils, such as sulfonated oleic and ricinoleic acids. All these special detergent solutions may be used, and, indeed, are also regularly in use for cleaning upholstery, curtains, and other fabrics.

Continuous Oil Refining

The Sharples supercentrifuge system for neutralizing oils, the Foster-Wheeler steam deodorizer with Dowtherm as heat carrier, and a continuous vacuum filtration system have been combined into a cycle of operations whereby an oil or fat can be continuously neutralized, deodorized and clarified. The output is considerably greater than in batch operation. I. Tovbin. *Masloboino Zhirovoe Delo* 15, No. 3, 5-7; through *Chem. Abs.*

Hydrogenation of Mixed Oils

Increasing the amount of catalyst in hydrogenating mixed oils results in a decrease in iodine value and an increase in the melting point of the product. Raney Catalyst Powder is simpler to use and gives about the same results as nickel catalyst from nickel carbonate. Mixtures of equal parts of pilinut and coconut oils gave good products on hydrogenation for 6 hours with 3 per cent of nickel, for 8 hours with 2 per cent, or for 12 hours with 1 per cent of nickel. Suitable products were obtained from 1:1 mixtures of peanut and coconut oils after 6 hours with 3 per cent of nickel or 16 hours with 2 per cent of nickel. Mixtures of kapok and coconut oils required 10 hours with 4 per cent of nickel. Antonio I. de Leon and Felipe T. Agdeppa. *Philippine Agr.* 28, 225-42.

Fat Determination

The Grossfeld method of determining fat by refluxing the fat-containing sample with trichloroethylene was compared with the usual Soxhlet extraction with ether. The Grossfeld method gave relatively much higher results for fat and a dark product which suggested possible contamination from rubber stoppers. W. H. Kitto. *Analyst* 65, 97 (1940).

Thermostability of Fats

Data on the hydrolysis of beef tallow, lard, coconut oil, palm-kernel oil, sesame oil, peanut oil, olive oil and trioleins at temperatures between 60 and 120° C. for time intervals of 7 days were obtained. The degree of fat splitting by warming was found to be independent of the original content of free fatty acids but rose with increases in temperature and time of heating. No appreciable splitting occurred in beef tallow or lard at temperatures up to 60° C. With vegetable oils it was found that each showed a critical temperature at and above which an appreciable increase in splitting occurred in 3 days. These critical temperatures were: Coconut oil 100° C., palmkernel oil 90°, olive oil 90°, peanut oil 80°, soybean oil 80° and sesame oil 75° C. E. Glimm, H. Wittmeyer and W. Jahn-Held. *Z. Untersuch. Lebensm.* 78, 285-93.

Oil and Fat Refining

(From Page 29)

silver, .002 per cent of bismuth and less than .0002 per cent of all other foreign metals combined.

In the construction of pumps, filter units and cast parts generally, the possibilities of high silicon iron are well worth considering. This material cannot be machined, but its high reliability under corrosive conditions have commended it favorably to the author.

In the realm of non-metals, rubber and ebonite linings etc. have only a limited value in view of their poor resistance to fats and oils. The recent advent of synthetic rubber substitutes (notably neoprene) has opened up considerable possibilities. Neoprene has a degree of resistance to oils and to alkalies which merit its consideration, quite apart from any pre-conceived notions as to the behavior of rubber in refineries. The highly tough and inert polyvinyl chloride resins now available in the form of thin sheets, can also be banded to metals or to wood and will undoubtedly find increasing application in plant construction in the near future.



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Products and Processes

Soapless Toilet Detergent

A detergent in bar form for toilet use substantially free from soap contains predominantly a mixture consisting of 5-60 per cent of a saturated superglycerinated fat, and not less than about 40 per cent of a substantially solid water-soluble salt such as the sodium salt of a compound from the following group, in all of which the alkyl radical contains more than 8 carbon atoms: Sulfonated aliphatic alcohols, sulfated aliphatic alcohols, sulfonated aliphatic hydrocarbons, sulfated aliphatic hydrocarbons, fatty acid esters of hydroxyethane sulfonic acid, fatty acid amides of methylaminoethane sulfonic acid, fatty acid esters of dihydroxypropane sulfonic acid and alkyl ethers of dihydroxypropane sulfonic acid. Robert A. Duncan to Procter & Gamble Co. U. S. Patent No. 2,175,285.

No-hydrolysis Toilet Soap

Toilet soap is made by the saponification of a mixture of oleic and myristic acids, the proportions to be selected according to the hardness desired. A small proportion of protective colloid is also used, a suggested formula being:

Myristic acid	.....	50 parts by weight
Oleic acid	.....	50 parts by weight
Soda in sufficient quantity for saponification		
Solubilized casein	.....	0.5-1 per cent

No hydrolysis takes place in a solution of this soap, which preserves its neutral reaction even when dissolved in a large amount of water. Georges Mangeot. British Patent No. 513,696.

New Detergent

A new detergent is produced by reacting a fatty material of the class consisting of fatty oil and fatty acid with a derivative of isobutylene of the class consisting of *beta*-methyl glycerine and *beta*-methyl glycidol. The product is then treated with

fuming sulfuric acid of such strength that the concentration of sulfuric acid after reaction is around 99.3 per cent. The product is finally neutralized. Colgate-Palmolive-Peet Co. Canadian Patent No. 387,238.

Fat-free Washing Agents

Soap builders and fat-free washing agents of all kinds are reviewed. Among those listed are the better known assistants such as liquid sodium silicate, 38° Be. containing 7.9 per cent of Na_2O and 26.3 per cent of SiO_2 , sodium metasilicate, NaSiO_3 , $5\text{H}_2\text{O}$ or $\text{NaSiO}_3 \cdot 9\text{H}_2\text{O}$, and the phosphates including trisodium phosphate, sodium metaphosphate and sodium pyrophosphate. Other substances listed as filling agents include a number of questionable value such as ammonium salts, Glauber salt or sodium sulfate decahydrate, magnesium chloride, aluminum sulfate and alum. Many of these are recognized as mere diluents. *Allgemeine Oel-und Fett-Ztg.* 36, 477-30 (1939).

New Soap Builder

A recently discovered method for the relatively cheap production of sulfamic acid makes its use for a variety of purposes more important. Use of the ammonium or sodium salt of sulfamic acid with soap as a builder increases both the rate of solubility and the degree of solubility of the soap. Sulfamates assist in hard water by dissolving or dispersing lime and other heavy metal compounds. Sodium sulfamate prevents concentrated soap solution from setting to a gel on cooling. J. Wake-lin. *Am. Dyestuff Reporter* 28, 729-31.

Sodium Silicate Detergents

A product containing sodium silicate for use as a detergent comprises a reaction product whose molecular ratio of Na_2O to acidic oxide

is from approximately 1:1 to 2:1. A sodium sub-silicate containing a higher molecular ratio of Na_2O to acidic oxide than 1:1 and higher than that of the product desired, is mixed, in the absence of sufficient water to dissolve a substantial portion of the reactants, with a sodium compound selected from the group consisting of water glass, sodium bicarbonate, monosodium phosphate, disodium phosphate, or sodium borate. The reactants are present in such molecular proportions that the ratio of sodium oxide to acidic oxide in the reaction mixture is from 1:1 to 2:1. Walter S. Riggs and Clarence W. Burkhart to Pennsylvania Salt Mfg. Co. U. S. Patent No. 2,175,781.

Silicated Washing Soda

A type of washing soda may be made from a mixture of sodium silicate and calcined soda. The latter combines with all of the water of the liquid sodium silicate and is converted to crystalline soda. Excess of calcined soda should be present. The ratio of sodium silicate, $\text{Na}_2\text{Si}_4\text{O}_9$ to soda is 9:46. About 20 per cent of sodium tetrasilicate will be present. This corresponds to a product made as follows: 30 parts of commercial sodium silicate, 36-38° Be. are diluted with 25 parts of water. To this while hot are added 45 parts of calcined soda ash. The mixture is stirred to a homogeneous paste and then poured out for cooling. During cooling it should be shoveled up frequently in order to aid solidification and to give a voluminous light powder in the end. *Seifensieder-Ztg.* 67, 14 (1940).

Silk Washing

Experimental washings of silk in the presence of sodium hexameta-phosphate showed that the fat content of the fibers was decreased, the time of washing reduced and the formation of calcium soap prevented. The use of metaphosphate in indanthrene dyeing is of some practical interest. K. M. Markuze and M. N. Vasil'eva. *Khim. Referat. Zhur.* 2, No. 2, 116; through *Chem. Abs.*

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685—Mixing Catalog

Mixing Equipment Co., Rochester, has issued a new catalog giving full particulars about installation of and applications for its line of "Lightnin" portable and stationary mixers. Suggestions are given as to tank proportions, flange data, drive tripods, etc. Copies of the catalog are available.

686—Handling Equipment

Lewis-Shepard Sales Corp., Watertown, Mass., has just issued a catalog of materials handling equipment which the company distributes. This includes lift trucks, floor trucks, portable elevators, skid platforms, storage racks, etc.

687—Bulk Soaps

Bobrick Mfg. Corp., Los Angeles, has just issued a new booklet dealing with liquid hand soaps, floor soaps, surgical soaps, shampoos and soap bases which the company sells.

688—Pine Fatty Acids

The Industrial Chemical Sales Division of West Virginia Pulp & Paper Co., New York, has issued a new booklet "Fatty Acids from Pine Wood" giving full particulars as to the composition, characteristics and uses of its products "Liqro" and "Indusoil." Copies are available.

689—Perfuming Materials

Aromatic Products, Inc., New York, has just issued a new price list for its line of perfuming materials and deodorant oils for insecticides, disinfectants, liquid soaps, para-

blocks, polishes, cleansers, fumigants, etc.

690—Essential Oils

Dodge & Olcott Co., New York, has just issued a new catalog and price list for its line of essential oils, aromatic chemicals, perfume bases, insecticide concentrates, etc.

691—Pumps and Valves

Chemical Equipment Corp., Montpelier, Ind., has just issued two new bulletins dealing with pumps and valves for the handling of corrosive liquids in industry. Copies are available.

692—Filling Machinery

Karl Kiefer Machine Co., Cincinnati, has recently mailed a new folder giving particulars about Kiefer filling machinery, bottle cleaners, tube fillers and sealers, etc. Copies offered.

Graying in Dry Cleaning

From time to time dry cleaners experience difficulty with white woolen garments yellowed from age or wear, or turned a gray dingy color. Bleaching is usually effective in cases of yellowing, but when graying is the result of metallic action bleaching has no effect unless preceded by other suitable treatments.

A solution for testing for corrosion graying is made by adding $\frac{1}{4}$ pint of ether to a pint of heavy dry-cleaning soap solution and applying this to the affected areas with brushing to work it into the material. If the material comes out white on rinsing, it is proof of corrosion graying. Soaking in a solution of the above type should then remove the grayness.

Metallic graying is usually caused by the release of accumulated decomposed cleaning soap on the inside of the shell of the washer or the outside surface of the cylinder. Only a very small amount of this metallic soap will cause graying of

white woolens. The cure is to clean the washer with fairly hot water in which is dissolved at least 1 pound of trisodium phosphate for each 5 gallons of water in the machine. The machine should be run for about a half-hour, the solution dumped and the washer rinsed with 2 or more warm rinses. John A. Stinson. *Laundry & Dry Cleaning J. of Canada* 19, No. 10, 14, 16 (1939).

Zinc White in Soap

Zinc oxide is best used in soap which is intended to be on the hard side, in which case it will improve the polish and general appearance. Zinc white (oxide) has no effect on detergent properties but tends to improve the emollient character. If abnormal amounts of free fatty acids are present, their reaction with the zinc white to form zinc soaps is apt to result in a rather sticky and objectionable lather.

Trouble may be caused by the use of inferior grades of the oxide, especially if lead or iron salts or oxides are present. These might give rise to the formation of spots due to metallic impurities and might also cause undesirable changes in the perfume bases. For the highest quality of white toilet soaps it is advisable to use a pharmaceutical grade of zinc white. The most important effect is probably that of improving the polish of the soap. Paul I. Smith. *Am. Perfumer* 40, No. 1, 57-8 (1940).

Oil Pressing

Pressing sunflower-seed pulp without a press cloth lowers press efficiency by 5-10 per cent but gives a better appearing cake, clean and free from shreds of wool. A procedure in which the pressure was raised to the first stage in 3 minutes, then to the final stage in 3 minutes, proved to be too rapid. More time is needed for attaining the final pressure of 300 atmospheres. Iron and wood frames for pressing without a press cloth are described and illustrated. S. Kucherov. *Masloboino Zhirovye Delo* 15, No. 2, 9-12; through *Chem. Abs.*

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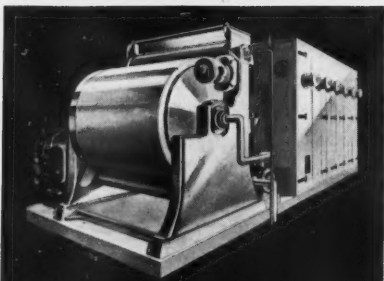
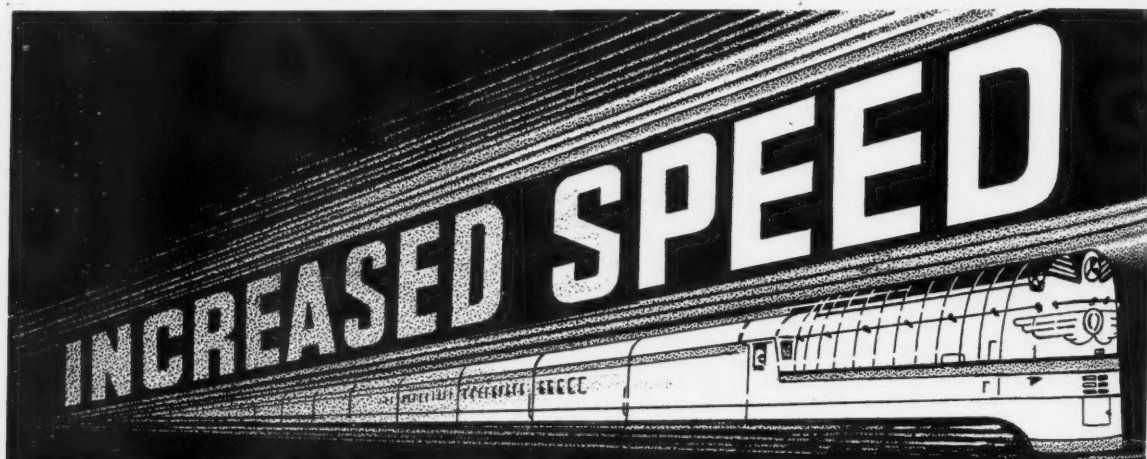
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No. 2,188,951, Insecticide, Patented February 6, 1940 by Armin Joseph Kraus, Jersey City, N. J., assignor to The Richards Chemical Works, Incorporated, Jersey City, N. J. An insecticide and fungicide containing as its active ingredients the complex copper salts of sulphurized cresylic acids and naphthenic acids.

No. 2,190,591, Processing Soap, Patented February 13, 1940 by Benjamin Clayton, Houston, Texas. A method of processing soap, which method includes the steps of: maintaining a mass of soap in a chamber; continuously moving a soap stream into the chamber and discharging same into the mass of soap at a position beneath the surface thereof while the temperature of the soap stream is sufficient to liberate vapors at the pressure existing in the chamber whereby the soap in the stream becomes associated with the mass of soap and vapors are continuously liberated from the soap mass; continuously withdrawing vapors from that portion of the chamber above the surface of the soap mass; and continuously withdrawing soap from the soap mass at such rate as to maintain the surface of the mass of soap at a position above the point of discharge of the soap stream.

No. 2,190,615, Processing Soap, Patented February 13, 1940 by Benjamin H. Thurman, Bronxville, N. Y., assignor to Refining, Inc., Reno, Nev. A method of making soap, which includes the steps of: forming a mass of substantially anhydrous soap in a molten, plastic, or semi-plastic condi-

tion; removing a stream of the soap from the mass, cooling the stream of the soap while in substantially anhydrous condition and while in a space confined from the atmosphere to form a friable soap which is directly and substantially uniformly hydratable by adding moisture thereto; continuously breaking up the friable soap as fast as produced; and adding moisture to the broken-up soap in controlled amount to hydrate same.

No. 2,190,616, Splitting Glycerides and Recovering Glycerin, Patented February 13, 1940 by Benjamin H. Thurman, Bronxville, N. Y., assignor to Refining, Inc., Reno, Nev. The process of splitting glycerides, which comprises, subjecting the glycerides in admixture with water in a splitting zone to a high temperature and superatmospheric pressure sufficient to cause liberation of glycerin and fatty acids, discharging a heated stream of the resulting mixture from the zone into a vapor separating zone, maintaining a high temperature and vacuum sufficient to separate as vapors glycerin and fatty acids in the vapor separating zone, withdrawing and condensing the vapors of glycerin and fatty acids, and pushing solid and plastic materials deposited in the evaporating zone from the evaporating zone while maintaining the vacuum.

No. 2,190,656, Insecticide, Patented February 20, 1940 by Fred W. Fletcher, George E. Lynn and Frank B. Smith, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich. An insecticidal composition containing as a toxic ingredient a liquid reaction product of pinene and diphenyl oxide.

No. 2,190,673, Insecticidal Spray, Patented February 20, 1940 by John W. Orelup, Summit, N. J. An anti-parasitic spray for application to plants, comprising an emulsion, with a large excess of water, of mineral oil of low sulfatable residue type, containing as the emulsifying agent a condensation product of approximately molar quantities of coconut fatty acids with polyethylene glycols having more than 2, but less than 5 ethylene glycol groups, the ratio of the water content to the emulsifying agent being of the order of magnitude of 500.

No. 2,190,702, Parasiticide, Patented February 20, 1940 by Robert H. Daines, Jr., Highland Park, N. J., assignor to Endowment Foundation, New Brunswick, N. J. A parasiticide for controlling plant parasites in or on the soil including mercury and a carrier in a relatively finely divided state

including at least one metal in the electro-motive series above metallic mercury.

No. 2,190,769, Washing and Cleansing Agent, Patented February 20, 1940 by Karl Butz, Chemnitz, Germany, assignor, by mesne assignments, to American Hyalsol Corporation, Wilmington, Del. The process of producing a washing and cleaning agent composed of a water soluble salt, of a pyrophosphoric acid ester of a higher molecular alcohol having at least eight carbon atoms and a portion of the unreacted alcohol which comprises mixing pyrophosphoric acid and a higher molecular alcohol having at least eight carbon atoms at a temperature of from about 85 to 115°C., until maximum esterification has taken place and thereafter neutralizing to form a water soluble salt of the pyrophosphoric acid ester of the higher molecular alcohol treated.

No. 2,191,199, Abrasive Detergent, Patented February 20, 1939 by Ralph E. Hall, Mount Lebanon, Pa., assignor to Hall Laboratories, Inc., Pittsburgh, Pa. An abrasive detergent composition containing an alkali-metal salt of the group consisting of soluble metaphosphate and triphosphosphate which is capable of sequestering calcium in a but slightly ionized condition, and an inorganic abrasive of the group consisting of dicalcium phosphate, tricalcium phosphate, calcium carbonate, magnesium oxide, calcium metaphosphate, and magnesium metaphosphate.

No. 2,191,259, Insecticide, Patented February 20, 1940 by Kaspar Pfaff and Michael Erlenbach, Frankfurt-on-the-Main-Hochst, Germany, assignors to Winthrop Chemical Company, Inc., New York, N. Y. Insecticides comprising a diazoamino compound free from sulfonic acid groups and carboxyl groups.

No. 2,191,300, Insecticide, Patented February 20, 1940 by Lloyd E. Smith, Washington, D. C., assignor to Henry A. Wallace, as Secretary of Agriculture of the United States of America, and his successors in office. An insecticide containing as its essential active ingredient iodosobenzene.

No. 2,191,301, Insecticide, Patented February 20, 1940 by Lloyd E. Smith, Washington, D. C., assignor to Henry A. Wallace, as Secretary of Agriculture of the United States of America, and his successors in office. An insecticide containing as its essential active ingredient phenyliodo-chloride.

Silicate Cleanser

A jelly-like metallic silicate is used as cleansing agent. It is prepared by mixing solutions of sodium silicate and magnesium chloride. Steimmig. German Patent No. 325,796.

Pyrophosphate

(From Page 26)

French 822,954 applied for June 11, 1937. Chemische Fabrik Joh. A. Benckiser, "Procede de production de combinaisons d'alcali solides"—Blocks containing some pyro may be made by mixing sodium metaphosphate, sodium carbonate and not enough water to allow complete reversion to orthophosphate. The idea does not seem to be in use in this country.

U. S. 2,093,928. Sept. 21, 1937. Preston, Coith & Duncan assignors to Procter & Gamble Co., "Liquid soap"—Neutral sodium pyrophosphate or a mixture of same with a little acid pyrophosphate added to liquid soaps permits using ordinary hard water in compounding them without getting clouding. The patent comes near enough to the ordinary use of pyro with soap to deserve attention of all who mix the two.

U. S. 2,097,517. Nov. 2, 1937. C. B. Durgin assignor to Monsanto Chemical Co., "Soluble hypochlorite composition"—A soluble calcium hypochlorite resistant to soap or TSP is made by adding sufficient sodium pyrophosphate to calcium hypochlorite.

U. S. 2,108,553. Feb. 15, 1938. Speas & Mnookin assignors to Speas Mfg. Co., "Method for making lead arsenate in finely divided form"—Since the solubility of lead arsenate in dilute acids may be increased over 20 times by adding sodium pyrophosphate, the plan is to make a dilute solution thus and then reprecipitate it by neutralizing the acid, thus obtaining an exceedingly fine suspension of lead arsenate. Pyro, though claimed, is not recommended as metaphosphate is so much better.

U. S. 2,108,563. Feb. 15, 1938. Monokin & Speas, "Method of effecting solution of lead arsenate." Spray residues of lead arsenate on fruits and vegetable may be removed by cold washing with dilute solutions of pyro acidified to methyl orange.

U. S. 2,119,523. June 7, 1938. K. Butz assignor to H. Th. Bohme Aktiengesellschaft, "Pyrophosphate ester bleaching agent"—Various ways

of making very stable compounds of peroxide and fatty alcohol pyrophosphates are disclosed, several of which use sodium pyrophosphate as raw material.

U. S. Reissue 20,754. June 7, 1938. L. Rosenstein, assignor to Hagen Corporation, "Process of treating water"—This is a reissue of reissue 20,360 of May 11, 1937, which is a reissue of 2,038,316 of April 21, 1936. Pyro is added to limebearing waters at the rate of about 1/1000 of the chemical equivalence in order to prevent or delay precipitation in water-softening or in irrigating with ammonia. Anyone concerned with this patent would better consult a patent attorney, as the situation is quite complex.

U. S. 2,121,952. June 28, 1938. Colonius & Weldes assignors to Henkel & Cie, "Bleaching, washing and cleansing compositions"—Inter alia mixtures of pyro, a persalt and a stabilizing insoluble stannate are disclosed. It is the stannate, not the pyro, that is characteristic and essential.

U. S. 2,132,366. Oct. 4, 1938. J. A. Wilson assignor to Monsanto Chemical Co., "Process of bating skins in leather manufacture"—One constituent of the bate is a fused mixture of 80 per cent sodium metaphosphate and 20 per cent pyro.

Canadian 377,027, Oct. 11, 1938. Shell Development Co., "Well drilling fluid"—a very small amount of pyro added to well drilling muds reduces the viscosity. The patent gives an excellent description of well drilling muds and how they are controlled. Anyone specially interested in this problem is advised to consult the patent. Unfortunately Canadian patents are not published or even photostatted and the only way to consult one is to have a copy made by the Canadian Patent office at a cost of about \$5.00.

There is as yet no equivalent American patent but we have heard that there are at least five applications now in U. S. Patent Office. The usual course of such cases is that the U. S. patent, if it issues at all, is narrower than the foreign patent. The trade is proceeding as if no patent will

issue, which is of course just their guess."

U. S. 2,141,189. Dec. 27, 1938. O. Lind assignor to Henkel & Cie., "Bleaching and cleansing compositions"—Additions of pyro to perborate-soap solutions stabilized with an insoluble silicate is disclosed but not claimed as essential.

U. S. 2,142,944. Jan. 3, 1939. F. P. Kerschbaum assignor to H. T. Stowell, "Production of phosphates"—Pyro is made by burning phosphorus at a very high temperature with molten sodium chloride in a special furnace. The scheme is believed not to be in commercial use.

U. S. 2,145,344. Jan. 31, 1939. F. Draibach assignor to Hall Laboratories, "Stable phosphorus—containing oil emulsion"—Addition of small amounts of pyro to cod liver oil emulsion is disclosed but not claimed.

U. S. 2,149,734. March 7, 1939. R. E. Hall assignor to Hall Laboratories, "Laundry starch and method of using the same"—Sharp distinction is made between sodium tripolyphosphate ($\text{Na}_3\text{P}_3\text{O}_{10}$), hexameta-phosphate ($\text{Na}_6\text{P}_6\text{O}_{18}$) and pyrophosphate ($\text{Na}_2\text{P}_2\text{O}_7$). Addition of tripolyphosphate to laundry starch is claimed and the teaching is that the others are to be avoided. Tetraphosphate is not mentioned.

It is no wonder that the U. S. Patent office is bewildered by so many conflicting claims for "molecularly dehydrated phosphates" and their polymers.

U. S. 2,152,520. March 28, 1939. O. Lind assignor to Henkel & Cie.,—Very much like 2,141,189 (see above). Pyrophosphate is mentioned but not claimed as essential.

U. S. 2,159,381. May 23, 1939. Jochum, Greier & Pauser assignors to General Aniline Works, "Washing composition"—Combinations of pyro with various synthetic organic detergents are claimed.

U. S. 2,166,362 and 2,166,363. July 18, 1939. J. D. MacMahon assignor to the Mathieson Alkali Works, "Stable calcium hypochlorite composition"—Dry mixtures of chloride of lime and a minor proportion of pyro are claimed in both patents.

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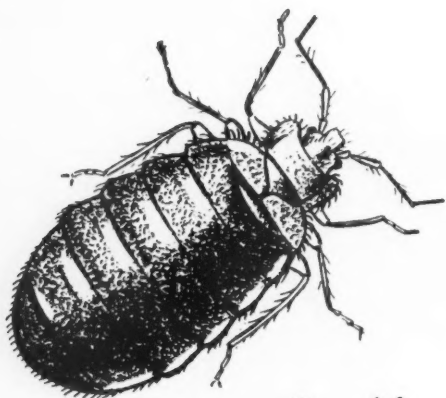
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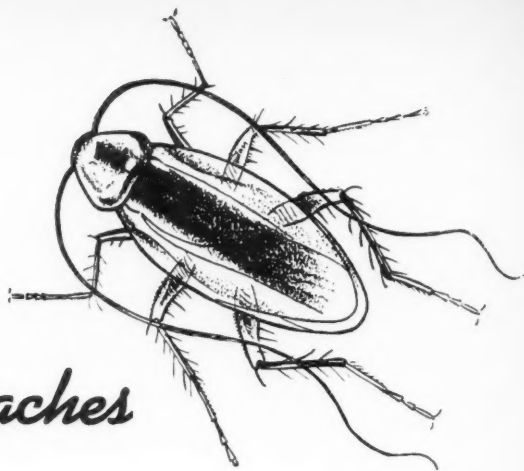
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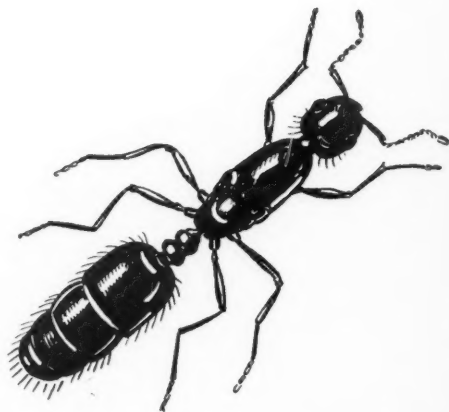
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PYRIN produces a Grade AA spray at a 20-to-1 dilution. Compare its cost with Basic Pyrethrum Extract No. 191—and notice the saving

Manufacturers of industrial sprays also favor PYRIN for its high killing power. Granaries present a good problem where you have to combat cereal pests like the flour beetle and the rice weevil. A typical example is offered in this illustration:



RICE WEEVIL

Strength of Spray	% Kill Adult Beetles
6.3% Pyrin.....	99
6.3% Pyrethrum concentrate containing 2 grams Pyrethrins per 100 cc.	94

PYRIN is known and respected all over the world, border-to-border and coast-to-coast; from Cape Town to North Cape, from Buenos Aires to the Bering Sea. Wherever insect sprays are used you will find Pyrin plays an important part in their manufacture. Millions of gallons of insect spray are made from Pyrin.

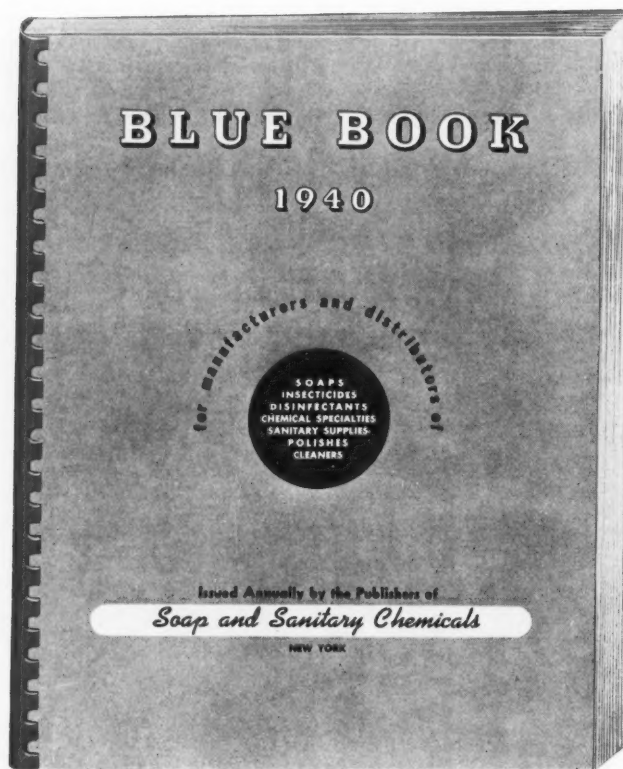
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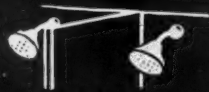
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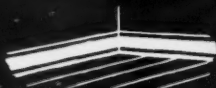
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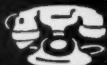
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D.H.S. Activator will give your sprays an extra kick, at lower cost. For this low-priced material increases both knockdown

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Cresylic Acid*

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Is There An INSECTICIDE MANUFACTURER "from MISSOURI" in the House!

MM & R

invites you to take issue with our statement "that in virtually every instance where a producer has told us the limit of his perfuming budget that M M & R has succeeded in meeting the requirements under the allowed production budget."

MM&R, accordingly, invites you to send us a pint or two of your unperfumed spray, with a notation regarding contents; and to check your requirements as follows—

- | | |
|---|---|
| <input type="checkbox"/> Neutralize spray without perfuming | <input type="checkbox"/> The limit of our budget for the purpose checked is |
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MM&R will return your spray, perfumed or neutralized, as requested and let you be the judge. If you have something of the "from Missouri" spirit, you'll send along your spray. There's more than one good reason why insecticide manufacturers, in ever increasing numbers, are switching to M M & R.



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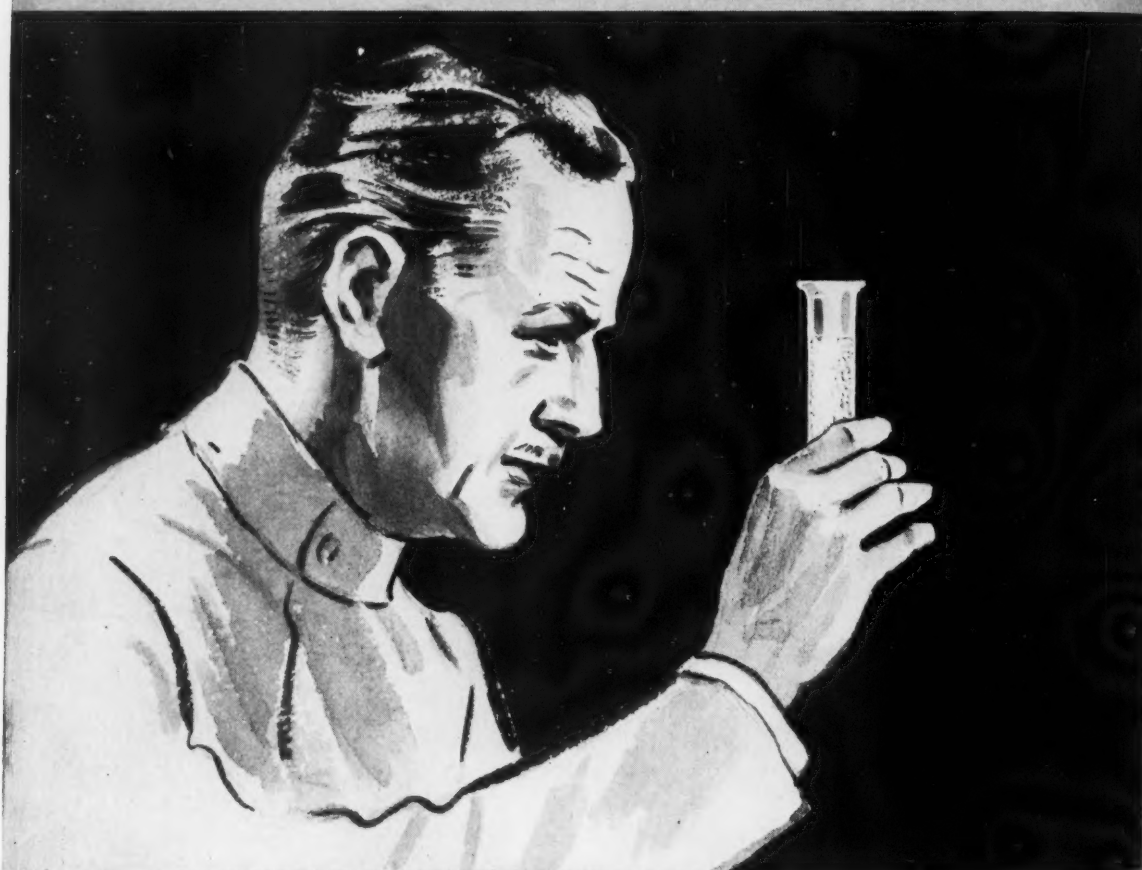
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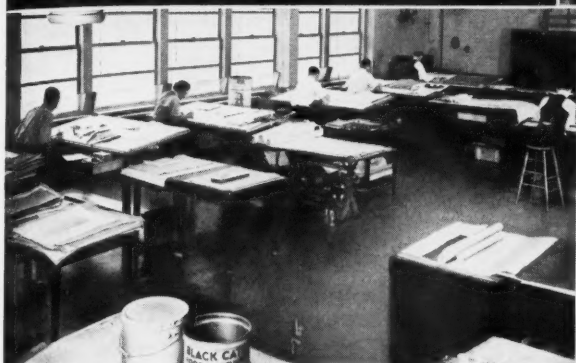
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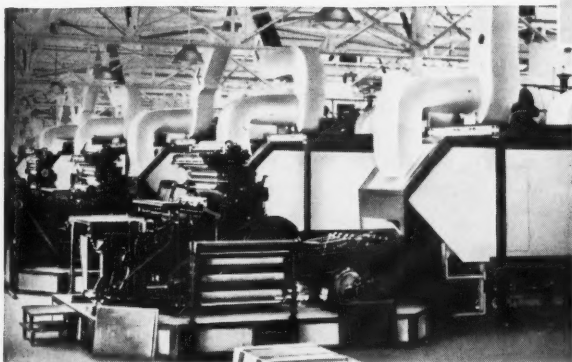
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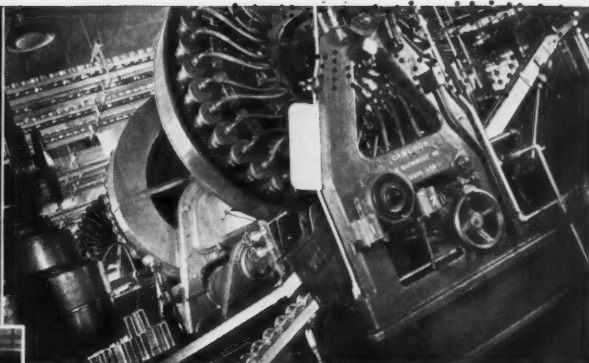
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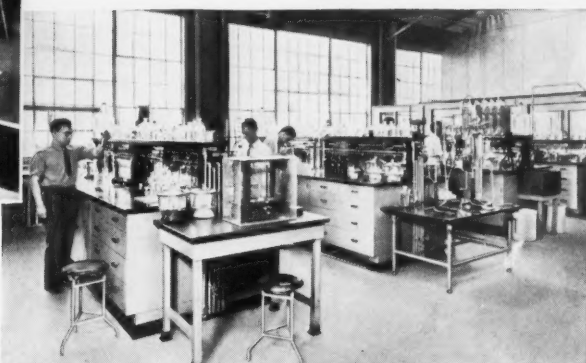
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I N D E P E N D E N T A N D H E L P F U L

April, 1940

Say you saw it in SOAP

89

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COEF. 2 TO 20 PLUS

STOCK & ANIMAL DIPS
COEF. 2, 3, 4, 5, & 6

TARACID OIL
10%, 15%, 20%, 25%,
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Put them all together — they spell

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Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

DO dangerous bacteria occur in common places? Is wider and more frequent disinfection one of the practical preventives to the spread of disease by such bacteria? The answers to these questions may be determined as the ultimate result of a new research project the first step in which has just been taken at a prominent medical college under the auspices of the National Association of Insecticide & Disinfectant Manufacturers. Starting in a small way, plans for the future call for a considerable expansion in this work which is so closely tied up with the use of disinfectants. Along with a continuation of its insecticide research, the Association is to be commended for initiating this undertaking which eventually should prove of great value to every disinfectant manufacturer.



FINE milled pyrethrum powder was offered in the trade last month at a price less than half of that quoted in competition by leading pyrethrum millers. Investigation brought out the fact that this cheap powder was in fact nothing more than exhausted pyrethrum which had been used in extract manufacture, and subsequently dried and milled to a fine powder. Its pyrethrin content and its insecticidal value were both just about zero. Warnings were issued to the trade promptly by the National Association of Insecticide & Disinfectant Manufacturers, and by the National Pest Control Association.

The price at which this material was quoted should in itself have been warning enough. If in keen competition, the leading millers of pyrethrum have been quoting all along well over

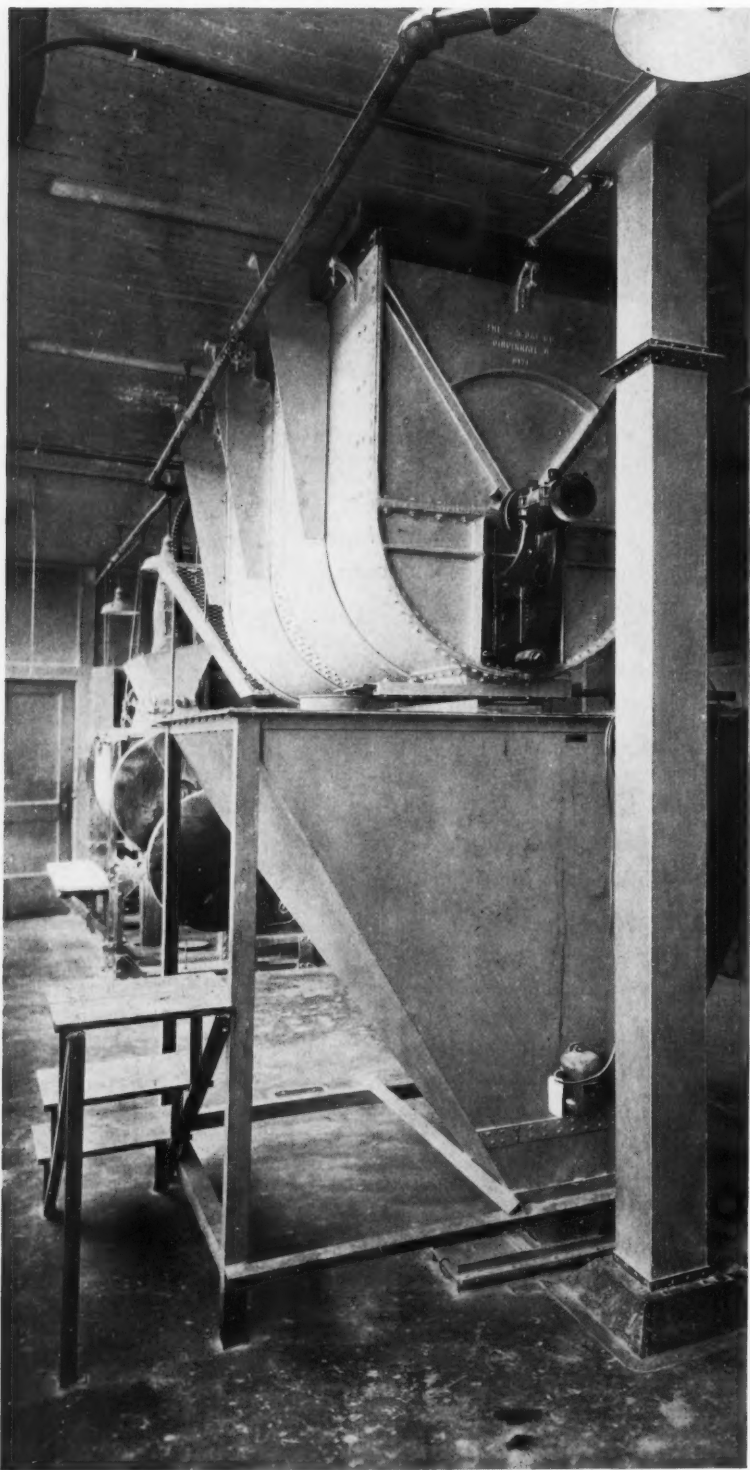
thirty cents, how could some firm foreign to the business be in a position to offer standard material at less than half? Common sense should have indicated that there was something fishy about the material,—and there was. It was an out and out fraud,—a hook baited for suckers who can see nothing but the price tag when they buy merchandise.



A HEARING on wages and hours for manufacturers of chemical products, in which group it is proposed to include all insecticides and fungicides, will be held in Washington on April 12 before the Public Contracts Board under the provisions of the Walsh-Healey Act. This law has to do with plants supplying government contracts in the amount of ten thousand dollars and over, and the wages paid in the production of such goods. It has nothing to do with the general wage scale of industry which is covered under the Wages and Hours Act.

Although any wage scale set up under the Walsh-Healey Act will not affect general wages in the insecticide industry, some manufacturers fear that it may set a precedent which will come back to plague them later in the form of a too-high general minimum wage scale under the Wages and Hours Act. And they feel further that the place of the insecticide industry is not under the chemical group wherein they believe that the general average wage level may be too high.

Just how seriously these fears of establishing a precedent are to be taken, is not known. However, it is quite likely that the interests of both the chemical and the insecticide groups will be adequately protected at the hearing.



A horizontal powder mixer suspended from the ceiling so that the discharge is directly to a hopper at floor level. The raw materials are loaded into the mixer from an opening on the floor above.

Comments

DRY mixing has apparently not been given as much study as it might well receive. A well-known engineer has stated "The subject of mixing has the least foundation of all the unit processes in chemical engineering." Evidence of this is the fact that the crystals of bath salts, paradichlorobenzene, etc., are needlessly broken and the percentage of fines appreciably increased. Tinted talcs, face powders, and insecticide powders under a low power glass or rubbed out under a spatula, show uneven color distribution.

The horizontal type powder mixer fitted with spiral agitators finds widest application for both free flowing mixtures, such as bath salts, para crystals, detergents, or sweeping compounds, and non-free flowing impalpable powders such as talcs, tooth powders, soap powders, and insecticides. Satisfactory mixing of a given mixture in this equipment is often dependent upon the type of agitator with which it is fitted. If there is any tendency toward discoloration, the material from which both the body of the mixer and the agitators are constructed, should be given due consideration.

If there is an appreciable difference in apparent density of the impalpable powders to be mixed, the batch size should be small enough so that the agitating device breaks through the top of the batch. In fact, this is always good practice, as the double helical blades then carry the material from the bottom not too violently to the top. If the mixer is filled too full, the mixing time may be appreciably increased.

Being a simple mechanical

on DRY MIXING

By Ralph H. Auch

mixture, the batch is often allowed to mix needlessly long with attendant waste of power. Again, to keep up with the filler, it may not mix long enough. It is not uncommon to find that certain mixtures have an optimum length of time for mixing. There may be a cyclical movement of particles if there is little or no tendency to form agglomerates. The batch may approach uniformity *then recede* again.

This idea has been long and widely held. To prove or disprove it, four dissimilar products were mixed in mixers of similar construction. They were chosen because they were regularly produced, they were relatively easy to analyze, and each contained ingredients of appreciably different densities.

Face powder containing very light zinc stearate and relatively heavy zinc oxide and talc, was found to mix to uniformity then hold it regardless of continued mixing. This same was found true of tooth powder containing light magnesium carbonate and powdered castile soap and a mixture of dense and light chalks.

Baking powder containing, with other ingredients, light redried starch and sodium aluminum sulfate which has a very heavy apparent density, acted differently. Samples pulled at intervals varied appreciably

Mixers for dry powdered materials equipped with sifters of one type or another are finding increasing application as time goes on. This general type is available to handle batches from 20 pounds (hand power) up to 2,000 pounds as shown here. Photos courtesy J. H. Day Co.

in available carbon dioxide. Powdered ammonia composed of ammonium chloride and sodium bicarbonate and carbonate, also showed a variation in available ammonia as mixing was continued for a protracted period.

The optimum time is not set down since it would be valueless, as obviously each mixture in each mixer presents an individual problem. It does indicate that mixing time may advantageously be studied. If there be a cyclical effect, the upper and lower limits can be ascertained and the mean set up as standard practice. If there be none, then the mixing time at which satisfactory uniformity

is attained, can be set up. Capacity can thereby be increased by avoiding over-running, and if not needed, at least a power saving will be effected. A by-product of standardized mixing time in most colored mixtures, is an appreciably more uniform tint from batch to batch.

The pony mixer and its modifications, are ordinarily not looked upon as suitable for dry mixing. However, for mixtures that do not dust, they may prove suitable. The agitation is provided by vertical blades so that attrition is much less than in a horizontal mixer. Change cans or tubs are provided so that
(Turn to Page 113)



AUTOMOBILE POLISHES

By Dr. C. A. Tyler

AUTOMOBILE polishes or auto body polishes are sold under innumerable trade names, often implying that "Easy does it," or that the polish contains special and mysterious ingredients which make it a super-product. The implications of the trade names have frequently been found to bear no connection with the composition of the polish as determined by chemical analysis. In spite of occasional misnaming over-statements, auto body polishes are highly useful and important products.

Any car that is in everyday use acquires in time a "traffic film," slightly greasy in nature, to which particles of dust and dirt adhere. In time, this becomes so thick that when the car is cleaned this film can be seen to slough off in patches. A new car may need only washing, but after a time, polishing is also necessary to keep the finish bright. This is due to the type of finish commonly used on automobiles today. The first automobiles were finished with water-proof varnishes. These were replaced with baked-on enamels, which were in turn replaced by the very simply and quickly applied sprayed-on lacquers. A lacquer is based on nitrocellulose, which is usually unstable to light, but the adverse effect of light can be largely counteracted by heavy pigmentation. The presence of pigment does not entirely overcome the difficulty, so that the surface of a lacquered finish exposed as it is on an automobile, deteriorates, forming a thin layer of "dead" lacquer or decomposed nitrocellulose. This makes the finish of a car look dull and lusterless, which is one of the reasons for polishes being so important.

In order to polish a car, two operations are necessary. One is to remove the film of grease and dirt on the surface and any traces of "dead" lacquer which may be present. The other is to polish or brighten the surface. For the last ten years, much of the polishing of automobile bodies has been done with the combination cleaner-polishes designed to accomplish both of the results mentioned.

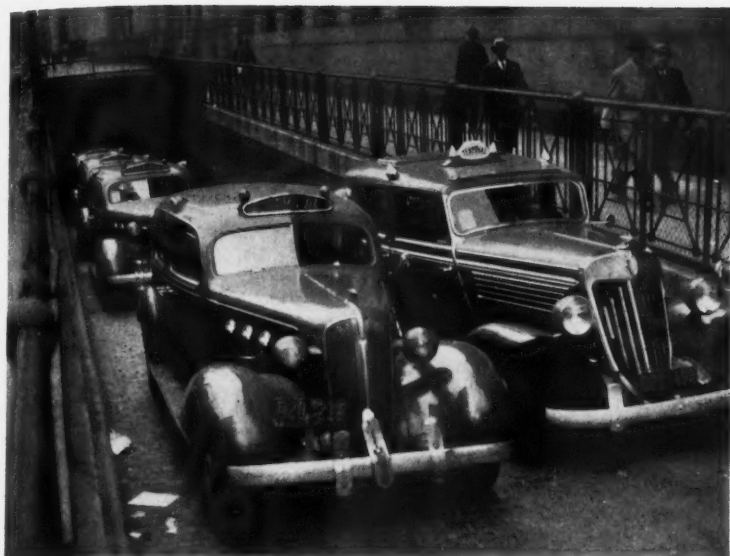
The cleaner-polishes consist essentially of mineral oil, a soft abrasive, an emulsifying agent, often a wetting agent, and water, the latter being the vehicle. The wetting agent helps penetrate the soil of grease and dirt, the oil dissolves grease in the film, and the abrasive loosens and removes the soil by friction. The oil preferentially wets the lacquered surface, leaving just enough of an oil film on rubbing to give the desired polished effect. The popularity of these cleaner-polishes is explained by the fact that they actually work and that they can be applied fairly quickly without too great an expenditure of effort. A defect is that the resulting polish does not last long, so must be renewed fairly frequently, according to the amount of use the car gets and the demands of the owner as to its appearance.

The user of a polish expects it to meet a number of requirements: (1) The polish should spread evenly and rub up easily, a factor which depends in part on its proper wetting power; (2) it should not dry too rapidly as this necessitates working on a small area at a time; (3) it should not dry too slowly, the liquid ingredients should have a fair degree of volatility, since the polish is rubbed up after it is dry. Otherwise it would take too long to do the job; (4) the

polish should be easy of removal so that too much labor is not required in the operation; (5) it should clean off all of the dirt and leave a bright finish without appearing to be oily. The amount of oil actually remaining on the lacquer should be so small that the surface actually appears to be dry. Excess of oil will cause ready smudging. These requirements relate to performance. In addition the product should be homogeneous, not one in which a cake of abrasive settles to the bottom or a layer of oil separates at the top.

Light grades of mineral oil of paraffin oil type are used as the oil constituent. A refined mineral oil containing no oxidizable material is preferable, as the oil film will be more lasting. The oil should not be too heavy as this results in a greasy finish. If it is too light, it may volatilize so completely as to have disappeared before the user works his way around the car. Mineral oils with specific gravity at 60° F. varying from 0.80 to 0.86 have been used. The amount present in various commercial polishes varies anywhere from 2 per cent to over 20 per cent, the quantity used depending somewhat on the rest of the ingredients. Sometimes the mineral oil is accompanied by a lighter fraction of solvent such as kerosene, naphtha or xylene. These serve as diluents for the mineral oil and also help dissolve grease in the soil to be removed.

The abrasive used in a cleaner-polish must be very soft so that it will not scratch. Diatomaceous earth is used very generally. This is the same soft abrasive that is used in silver polish. In auto polish it is a cleaner, not a polishing agent. The proportion of diatomaceous earth present varies from 10 to 18-20 per cent. Incidentally



cleaner-polishes have sometimes been accused of scratching when in fact grit on the surface of the car had not been wiped or washed off before the polish was rubbed on.

The emulsifying agent to be used presents much more of a problem than would seem likely to a chemist who has not worked with auto polish. The most common emulsifying agent for general purposes is soap, and all varieties have been tried from soda soaps, triethanolamine soaps, morpholine soaps, and trimethylamine soaps, to soaps of various other amine derivatives. The trouble with using soap is that a polish emulsified with it does not give a very satisfactory gloss.

Sulfonated oils have been used as the emulsifying agent, but enough of these remain on the finish after application to cause rain-spotting. As a consequence, most manufacturers have resorted to the use of water-soluble gums as emulsifying agent, such as gum tragacanth, gum arabic, Irish moss and various other vegetable gums. From 0.1 to 0.8 per cent of these has been used in polishes, but practically, the amount necessary to give a stable emulsion of oil and water is apt to thicken the polish too much. Most auto polishes contain these gums, and because of this, are on the borderline of being too thick. Some formu-

lators have compromised by using a mixture of soap and gum.

Quite often a wetting agent is incorporated in auto polish to hasten attack by the polish on the traffic film. The one most used is glycerine, although some manufacturers use a monohydroxy alcohol such as isopropyl alcohol. The amount varies from about 2 to 8 per cent.

A number of cleaner-polishes on the market are sold under trade names of so-and-so "Wax." Some of these contain up to 1 per cent of wax and some of them contain none. One per cent of wax in a polish is more effective than might appear from that small a proportion. It may actually be 10 per cent of the active polishing material consisting of oil plus wax. While the idea of adding wax is intriguing, too much wax will make the polish sticky and gummy. Apparently the problem has been solved of how to get a small amount of wax into a cleaner-polish, but only a small amount. Examination of the surface of a car on which these products have been applied shows that they really do give a better finish, which naturally results in a more durable luster. A number of combination cleaner-polishes are now made containing small amounts of wax. They resemble the wax-free polishes in physical ap-

pearance, but stand up better in performance tests.

A commercial cleaner-polish containing the simple basic ingredients discussed has the following formula:

	Per Cent
Light mineral oil.....	11
Diatomaceous earth.....	13
Water-soluble gum.....	0.5
Glycerine.....	3
Water.....	72.5

A wax-containing polish has the following composition:

	Per Cent
Mineral oil.....	10
Diatomaceous earth.....	11
Water-soluble gum.....	0.8
Glycerine.....	2
Wax.....	1
Water.....	75.2

A somewhat more complicated product contains:

	Per Cent
Mineral oil.....	9
Castor oil.....	3
Diatomaceous earth.....	7
Soda soap.....	0.5
Wax.....	0.5
Naphtha (Stoddard Solvent).....	18
Bentonite.....	2
Water.....	60

The castor oil is intended to add to the depth of the luster produced by the mineral oil. However, such a mixture is hard to emulsify, and both soap and bentonite have been used to stabilize the product. Bentonite is a colloidal clay which owes its suspending power to adsorptive properties. It is in no sense an abrasive and is not a satisfactory suspending agent in polishes because it makes rubbing more difficult, due to slipperiness. Naphtha is a grease solvent and a diluent for the mineral oil.

The following is higher in abrasive content:

	Per Cent
Light mineral oil.....	8
Diatomaceous earth.....	17
Carnauba wax.....	1
Water-soluble gum.....	0.2
Triethanolamine oleate.....	0.2
Glycerine.....	5
Water.....	68.6

The emulsifying agent is a 50-50 mixture of gum and special soap, glycerine is present as a wetting agent, carnauba wax as a polishing agent in conjunction with the oil. The next formula is an example of a combination of volatile solvents with mineral oil:

	Per Cent
Light mineral oil.....	6
Kerosene	3
Xylene	4
Diatomaceous earth	9
Sodium oleate soap.....	0.2
Water-soluble gum.....	0.8
Glycerine	2
Water	75

A patented product uses sodium lauryl sulfate in combination with a gum as emulsifying agent.

Some polishes contain a small amount of dye. These are colored red, blue, brown, tan, pink, green, although many polishes are a creamy white. One advantage of coloring a polish is that color removed from the car on the cleaning cloth is not then so noticeable. Dead lacquer which has to be removed, will carry a certain amount of pigment with it. When automobile owners first saw this on their cleaning cloths, they thought that the polish was so drastic that it was breaking down the finish on the car. Manufacturers who prepare highly colored products probably feel that this is simpler than an educational campaign. Many products contain traces of odorants such as amyl acetate, although there is some prejudice against this odor as being associated with lacquer solvent. Probably the amount used for odor in most cases is not sufficient to be really distinctive, but serves more as a cover odor.

While most of the cleaner-polishes are liquids, a few paste cleaners are sold. These are similar in composition but naturally contain less water:

	Per Cent
Mineral oil	13
Diatomaceous earth	53
Sodium stearate soap.....	3
Water	54

The method of preparation of cleaner-polishes is to mix the oil and solvent, if the latter is to be used, and suspend the abrasive in this. If any wax is added it is melted and poured with vigorous stirring into the warm mineral oil mixture. Gum tragacanth or similar gum is allowed to swell by soaking in a portion of the water overnight, when it can be stirred up with the rest of the water. If soap is used, it is dissolved in warm water. Glycerine or alcohol is stirred into the water phase containing the emulsify-

ing agent. The oil phase is then added slowly to the warm aqueous solution with vigorous stirring. When well mixed and homogeneous it is allowed to cool.

Polish Emulsions

THE cleaner-polish is used by itself as both cleaner and polish. A different type of product is generally used when a car has been freshly washed. Except with new cars, a washed car is apt to appear dull, so that polishing is required. A cleaner-polish is not suitable for use on a wet car, as the cleaner-polish is supposed to dry before being rubbed up. For this reason, emulsion polishes are sold which can be applied to washed cars while they are still wet and which will give them the desired gloss. These polishes do not contain abrasive as their function is not to clean, but merely to produce a luster. They consist of an emulsion of mineral oil, usually some saponifiable oil, and water. The emulsifying agent is ordinarily soap, which can be used here because the polishing is done while the car is still wet. The soap is removed in the water phase during the wiping and rubbing down, so that it is never allowed to dry on the surface of the car as in the case of the emulsifying agent in the cleaner-polishes.

A typical emulsion polish contains the following:

	Per Cent
Light mineral oil.....	38
Castor oil	10
Potassium soap	1
Water	51

The presence of castor oil gives greater depth and brilliance to the polish than if the mineral oil were used alone. The oils wet the lacquer better than water does, so that when rubbed dry a light film of oil remains on the surface in sufficient quantity to give it a luster.

Sometimes a diluent is added to the mineral oil as an aid to evaporation:

	Per Cent
Mineral oil	42
Castor oil	5
Ammonia soap	2
Xylene	5
Water	46

When a diluent such as xylene is

added, the mineral oil can be somewhat heavier, as in the above it may have a specific gravity at 60° F. close to 0.9.

In one product 15 per cent of sulfonated castor oil was found in combination with 25 per cent of mineral oil. This is a mistake, as sulfonated castor oil should not be incorporated in a polish for outdoor use. Enough of the water-soluble sulfonated oil will be in the polish film to cause trouble as soon as the car is rained upon. Light blown castor oil is used in a number of these emulsion polishes and is very satisfactory, being chemically quite different from sulfonated castor oil. Emulsion polishes are sometimes called "wash-rack polishes" because of the way in which they are used.

Pre-wax Cleaners

WHEN the lacquer finish of an automobile is badly deteriorated, it may require more drastic treatment than is possible with a cleaner-polish. In cases where the surface has become roughened or a substantial amount of "dead" lacquer has to be removed, pre-wax cleaners or rubbing compounds are resorted to. The function of these products is to clean the surface thoroughly so that a polish in the form of wax can be applied later as a separate step. The basis of the cleaner is a stronger abrasive than diatomaceous earth, — tripoli or amorphous silica being commonly used. These are among the medium abrasives and are much used in metal polish. Applied to a car they do a real cleaning job. The abrasive is usually suspended in kerosene and the latter emulsified with water with the aid of soap. Most of these products are pastes and so contain waxes to give them the right consistency. A representative product contains the following:

	Per Cent
Tripoli	27
Kerosene	25
Soda soap	3
Beeswax	4
Paraffin wax	4
Water	37

The kerosene helps soften the traffic
(Turn to Page 113)

INSECT POWDER LABELS

What of pyrethrum deterioration, label calculations, methods of analysis, and cheap pyrethrum under the new F.D.A. Regulations?

ON SEPTEMBER 1 next, new regulations of the Food and Drug Administration under the Insecticide Act of 1910 will require a statement on the labels of pyrethrum powders, and certain other pyrethrum insecticides indicating (1) the pyrethrin content of the product, or (2) the inert material named and designated as other than pyrethrins. Heretofore, such statement of the active or inert ingredients of pyrethrum products has not been required. The Food and Drug Administration takes the attitude that heretofore suitable and accurate methods for the chemical determination of pyrethrins were not available, but that such methods are now available, and designates the Holaday modified mercury reduction method for Pyrethrin I, and the Seil Method for Pyrethrin II. These are methods as adopted and promulgated by the Association of Official Agricultural Chemists. The complete notification of the Food and Drug Administration to the trade was given in this publication, February, 1940, issue, page 127B.

In spite of the fact that there have been numerous questions offered in regard to details of the new regulation and some material has been published and communicated privately in answer to the questions, there still seems to be much uncertainty in the minds of the rank and file of insecticide manufacturers as to just how they shall label their pyrethrum insecticides. Manufacturers who desire to plan on their supplies of containers, especially lithographed cans, naturally feel that they must be certain before ordering the usual quantities of such cans in advance. Some state that

they plan to wait until the last minute before ordering cans to make sure that the Food and Drug Administration makes no changes in its new regulation or until some points which they now consider cloudy are clarified.

It is interesting to note in connection with the new pyrethrum label

**Suggested specimen labels for insecticide powders, fly sprays, cattle sprays, disinfectants, etc. are illustrated in the 1940 SOAP BLUE BOOK, issued recently, beginning on Page 145. Front and back label panels are shown. Most of the specimen labels were prepared by H. C. Fuller of Washington, D. C., consulting expert. All subscribers to SOAP & SANITARY CHEMICALS have received a copy of the 1940 BLUE BOOK.—
The Editors.**

requirements of the F.D.A. that back in 1933, Gnadinger¹ made the following comment: "Under the present rulings of the Food and Drug Administration . . . pyrethrum containing less than 5 per cent of stems and 2 per cent of acid-insoluble ash can be labelled and sold as 'insect powder' without any declaration of active and inert ingredients on the label. If, however, such pyrethrum is sold under a proprietary name, either alone or mixed with other material, the percentage of stems and acid-insoluble ash must be declared as inert ingredients. On the other hand, the Department has ruled that in labeling hellebore and tobacco dust, only the alkaloids may be declared as active

ingredients, while the remainder of the plant material, usually about 99 per cent, must be declared as inert."

"It is quite evident," he continued, "that in order to protect the consumer, the Food and Drug Administration should require that pyrethrum be labelled to show the pyrethrin content as active material and the remaining plant material as inert, precisely as it does with hellebore and tobacco dust, permitting, of course, either of the optional methods of stating active and inert ingredients, specified in the Insecticide Act."

In view of the fact that the regulation as issued only gave as an example of labeling a method for stating the active ingredients, some manufacturers asked if the method of stating inactive ingredients had been banned. Inasmuch as this alternative is given as part of the Insecticide Act of 1910 itself, no regulation of the enforcement agency can change it. It had been more or less taken for granted apparently that the average manufacturer was sufficiently familiar with the law to know this, but evidently such was not the case. In fact, perhaps the best advice which might be given to all insecticide manufacturers far and wide today would be to dig out a copy of the Act and read every word of it. There is certainly not much use in trying to understand rules and regulations if the law upon which they are based is wholly unfamiliar. So the first advice before writing any more letters to Washington or elsewhere is to *read the law* carefully.

Of the various questions which have arisen, those referring to label-

¹ Pyrethrum Flowers, C. B. Gnadinger, 2nd Edition, Pages 155-160, 180.

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with the good qualities already present in
their sprays . . . realizing the value of the

*Combination of Both
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ing pyrethrum powder mixtures, and what allowances to make for deterioration of the pyrethrum were asked most often. A few people are still asking if the new regulation applies to liquids. The answer given before is that it does not apply to ordinary household fly sprays because they are made with a petroleum base and are considered thus to contain 100 per cent active ingredients. It does, however, apply to the so-called pyrethrum garden sprays designed for dilution with water, and which are made with alcohols and other organic solvents not considered active ingredients. Checking into the labeling situation for powders chiefly, certain information which it is believed will be of practical value to manufacturers and answer some of their questions, was unearthed.

Pyrethrum Deterioration

INTO the picture of labeling pyrethrum powders and powder mixtures containing pyrethrum rears the head of the most serious problem of all, — deterioration resulting in loss of pyrethrins. Just how fast does pyrethrum deteriorate? On the answer to this question may rest the exact label figures which an insecticide manufacturer is going to have to use on his package. And it is a complicated problem, one which some manufacturers appear inclined to believe cannot be solved and which is going to muddle the whole labeling situation beyond hope.

Leading authorities agree, first of all, that pyrethrum deteriorates steadily in storage whether it be in the form of baled flowers or in one milled form or another¹. This deterioration as far as the insecticide manufacturer is concerned is the loss of pyrethrins by oxidation. But how fast does this take place? It takes place more rapidly under conditions which usually speed up oxidation,—higher temperature, ready access to air, exposure to sunlight, etc. It is retarded by lower temperatures, exclusion of air and light.

Now, the form and the man-

ner in which any pyrethrum powder is packaged and stored are factors which may vary widely. The rate of year around loss in hot climates like Florida will probably be much faster than in northern Minnesota, for example. If the material is kept in a warm warehouse, or store, it will lose strength faster. And so it goes. There is no uniformity of conditions under which pyrethrum is milled, packaged, and stored, and there is consequently no uniformity in the rate of deterioration. In other words, no set of accurate figures can be given for loss of pyrethrins under all conditions over a period of one, two, six or twelve months. All of which complicates attempts to label these powders with any degree of accuracy regarding pyrethrin content as the goods are *finally sold to the consumer*. And the Food & Drug Administration requires that the statement of ingredients on a label must be that which is present when the product reaches the ultimate consumer and not a figure showing what they were when the material was packed at the factory.

Of course, insecticide manufacturers must view this deterioration problem from the practical angle and in labeling powders made up wholly or in part of pyrethrum, must be guided accordingly. For some years, the standard of total pyrethrins in pyrethrum flowers has been taken as 0.9 per cent pyrethrins. But flowers running this high in pyrethrins have not always been available. Sometimes, and especially during the past few years, material of 0.9 strength has been scarce. The bulk of available Japanese pyrethrum has run closer to 0.8 per cent and on many lots down as low as 0.6 per cent. Cheaper Dalmatian pyrethrum has been running 0.4 and 0.5 per cent. There has been Kenya pyrethrum which runs from 1.2 up to 1.5 per cent pyrethrins, but the amount of this available compared to the total used has been small. In short, based on the general run of pyrethrum on the market, stocks of first grade powders of 0.9 per cent pyrethrins have not been too plentiful.

Figuring Out the Label

NOW, if an insecticide manufacturer buys pyrethrum powder for mixing or repackaging, there are several things which he must consider in figuring out his label. First, unless the material is definitely guaranteed at 0.9 per cent, it is probably closer to 0.7 per cent or 0.8 per cent. (If it is a Dalmatian powder, it is probably close to 0.4 per cent.) From this, he must figure that anywhere from 12 to 20 per cent loss of pyrethrins will take place during 12 months under average conditions.² The higher the pyrethrin content, the faster will the powder deteriorate. In other words, a Japanese material of 0.8 per cent may lose 20 per cent in a year while a Dalmatian powder of 0.4 per cent may only lose 10 per cent of its toxicity. Actual assay of each lot of pyrethrum as received or copy of such assay from the supplier will of course be necessary to know just where the starting point is in calculating deterioration.

So if the pyrethrum is given as 0.8 per cent pyrethrins, for the sake of safety, at least the top loss figure of 20 per cent should be taken if the manufacturer figures that his material may stay on dealers' shelves for a year. If he knows that it will move in two or three months, he can probably with safety halve this loss figure. But where is there a manufacturer who knows this definitely? For the first 90 days, the loss in pyrethrins is rapid and thereafter tapers off, until after a year the rate is greatly reduced. According to some authorities, a fine pyrethrum powder will deteriorate less rapidly than a coarser powder or granulated material. The explanation of this seems to be that because the fine particles pack tighter together, the spaces between them are cut down and access to air is reduced.

Some experiments indicate that loss of pyrethrins in storage for one year runs above 30 per cent even when packed in tight commercial containers.¹ Other figures on loss of pyrethrins based on the study of a

² A. Weed and H. Noble, private communications.

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dozen miscellaneous assorted ground samples of pyrethrum indicate a wide range of loss running from 9.3 per cent in eight months for one sample up to 33.3 per cent on two other samples tested at the end of 18 months and 30 months. The suggestion that some antioxidants may have a beneficial effect on pyrethrum powders in reducing the rate of deterioration, such as tannic acid and hydroquinone, has been made.

One other factor must be considered in calculating approximate pyrethrin losses. The new regulations of the Food & Drug Administration which go into effect next September 1, call for the use of the mercury reduction method for determining Pyrethrin I in place of the Seil Method now commonly used. The mercury method gives results about 0.1 per cent lower on the average than the Seil Method. This means that a pyrethrum which is 0.8 per cent by Seil, will be about 0.7 per cent by the mercury method. Consequently, after September 1, a label statement of pyrethrins will mean that they have been determined by the mercury reduction method. This automatically reduces the starting figure of pyrethrins in calculating deterioration. Some technical men in the insecticide industry state that there are still kinks to be worked out in the mercury method procedure, and are not in full agreement that it is an improvement over the Seil Method.

For the sake of illustration in working out a pyrethrum powder label statement, take the case of average good quality fine powder now being sold. This runs around 0.8 per cent by the Seil Method as used today. By the mercury reduction method which must be used officially after September, this same powder will assay 0.7 per cent pyrethrins. Assume that the material after packing in small retail containers will average six months on dealers' shelves, with some packages remaining unsold probably for a year or longer. Inasmuch as one of these latter packages might be picked up by a government inspector, the entire lot in question must be labeled accordingly and allowance

made for a full year at least of deterioration. For safety sake, take this loss at an average noted, namely 20 per cent. This means that the label should state no more than 0.56 per cent pyrethrins, or better yet to be perfectly safe, 0.5 per cent. Or if the inert ingredients are stated by choice, they should be given as 99.5 per cent. This latter labeling, that is stating the inert ingredients instead of the active, and this figure are those suggested by Gnadinger⁸ as the safest labeling procedure for the average packer of straight pyrethrum powder. Accordingly, he suggests a label in the following style:

Inert Ingredients —
Pyrethrum Powder
(Other than pyrethrins) . 99.5%

Or if the insecticide packer desires, the words, "Insect Powder," may be substituted for "Pyrethrum Powder."

Labeling Pyrethrum Mixtures

WHEN it comes to labeling mixtures of pyrethrum and other materials, the procedure becomes more complicated owing to the fact that the inert ingredients in the materials mixed with the pyrethrum may be numerous and may not be fully known. This is particularly true, for example, in the case of sodium fluoride when mixed with pyrethrum powder. The fluoride may contain four or five other salts, including silicofluoride, as impurities. It so happens that the silicofluoride can be classed as an active ingredient, but where chlorides, sulfates, etc. are present, they are considered inert and must be listed with the percentage of each given accurately.

Thus, to avoid these complications and possible variations from lot to lot of fluoride, and the trouble this would cause where the insecticide is packed in lithographed cans or where labels are printed in large lots, it is probably wise in the case of pyrethrum mixtures to state the active ingredients. Accordingly, based on the percentage of pyrethrum in the mixture, this can be calculated from a net figure of 0.5 per cent pyrethrins as noted previously. In short, a mixture containing 50 per cent pyrethrum powder, would show 0.25 per cent

pyrethrins on the label. The sodium fluoride can also be figured from the percentage of fluoride in the mixture, according to its actual content of NaF. If the mixture happens to contain 50 per cent of sodium fluoride of 96 per cent purity, then it can state 48 per cent sodium fluoride on the label. If sodium silicofluoride is present in the fluoride to the extent of 2 per cent, this material can in such a mixture be listed as 1 per cent sodium silicofluoride on the label. Accordingly a label for such a mixture would appear about as follows:

Per Cent	
Active Ingredients —	
Pyrethrins	0.25
Sodium Fluoride.....	48.00
Sodium Silicofluoride....	1.00
Inert Ingredients.....	50.75
Total	100.00

Of course in the case of a mineral salt such as sodium fluoride, there is no appreciable deterioration and none of the problems associated with the packaging of pyrethrum or other natural botanical material are encountered. The same is true where mixtures of sodium fluoride and inert substances such as talc, starch, earth, etc. go to make up a roach powder as is often the case. As the material leaves the factory, so it is bought by the ultimate user even though it be two years later. The usual form of labeling such mixtures is the same as the above with the pyrethrins omitted.

Low Grade Pyrethrum

IN FIGURING out what procedure he will follow in labeling his pyrethrum powder insecticides under the new regulations after next September 1, the average insecticide manufacturer has several other practical matters to face. He has the quality of the pyrethrum which he buys to consider with a very critical eye. If perchance he buys pyrethrum powder which is offered as "pure insect powder," or "pure pyrethrum powder," he should bear in mind that this means absolutely nothing as far as pyrethrin content is concerned. He can buy certain powders today at prices which are about half of those quoted for standard pyrethrum, and

⁸ Communication to N.A.I.D.M.

(Turn to Page 115)

What you want . .

in an insecticide perfume, is a product that satisfactorily and inexpensively covers the obnoxious odors of the base.

To do its job effectively, the perfume must completely cover the odors from start to finish, it must leave no perfumy pall, it must be pleasant to use in kitchen or living-room.

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VAN AMERINGEN-HAEBLER, INC.

315 FOURTH AVE., NEW YORK CITY

SANITARY SUPPLY SELLING . . .

comments by trade leaders

WHAT'S wrong with sanitary supply selling? Following the rather blunt discussion of this subject—a discussion which on the whole was none too complimentary to the sanitary supply industry, — by an anonymous salesman in the last issue, a few leaders in the trade were asked to comment. Are the ideas put forward by the salesman in question right or wrong? Is the industry suffering chiefly from faulty selling methods and a wrong system of compensating salesmen? Do all houses have a perpetual salesman problem? Do good salesmen desert the sanitary supply field at the first opportunity?

These and a number of other questions raised in the article published last month, are taken up and discussed in the replies from the industry. These comments follow:

J. L. Brenn, president, Huntington Laboratories, Huntington, Ind.: "The article 'What's Wrong with Sanitary Supply Selling' appearing in the March issue of your magazine is both interesting and amusing. It does bring up a situation which we know exists among many of the small houses selling sanitary supplies, but is quite far from the point when the older and more successful houses are considered, and from this latter standpoint there are many misstatements in this article. For instance right here in our own organization we have eleven salesmen who have become eligible for membership in our fifteen-year club, meaning that they have been with us more than fifteen years continuously. So surely, these men cannot be considered failures.

We have never in all the years of our business had a salesman leave

our employ and engage in this business for himself, so it can't be that we are encouraging people to start in business for themselves. We have over two hundred written applications from successful salesmen working in other industries who are now employed and who would like to become connected with us but for whom we cannot find a place in our organization due to each territory being covered and if ours was as bad a proposition as the writer's article would indicate, surely these men would not be so anxious to become connected with us. There are many men who would rather work for us on a commission basis than on a straight salary, so the commission arrangement is not entirely bad either.

All in all, the writer of this article is speaking of the large number of small business establishments which in total perhaps does not do 25 per cent of the entire volume of business done in this industry and who are ill-financed and ill-managed and in most instances conducted by ex-salesmen who have worked for others similarly situated, and these certainly cannot be considered as typical of the industry as a whole. I frankly admit, in a line which lends itself so readily to sophistication as does the sanitary supply business, there are many who are attracted to it with the hope that they can put something over and in most instances they spend their lives trying it without ever succeeding but in the process of trying, create the kind of conditions the writer refers to. In fact, I'm fully convinced that the reason for the success of the old established houses is that the consumers or buyers have learned to depend upon them and they are unwilling to let themselves be continually taken advantage

of by the unknown and unheard of establishments, even though the bait of low price is being constantly offered."

J. W. Schiffer, president, Federal Sanitation Co., Cleveland: "Yes, I have read 'What's Wrong with Sanitary Supply Selling' in the March issue of SOAP. The writer of that article is unusually well versed with his subject, and I am heartily in accord with it in full. I could add several more pages covering certain phases that the anonymous writer did not touch on, but I also might find it desirable if I were to write to do so anonymously, in order that I would not lay myself or my organization or our salesmen open to the ill-will of certain members of our industry.

Since it is a known fact that these crooked salesmen are definitely contributing to the ill-will of the public and the destruction of our business, why is it that our Association is willing to stand by and do nothing about it?

We go to much pains in investigating an applicant before we employ him. We give him an educational coaching . . . we grant him a reasonable drawing account, and then find it necessary to put him into the territory and compete against the type of men and the condition so aptly outlined in the article by the anonymous writer.

As I stated in the beginning of this letter, there are many other phases involved which were not touched on by the writer, many of them as vital or even more vital than the subject treated in his article, but I find myself back with the same thought: What



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is there to do about it, and who is going to do it?

Isn't it about time that our industry put the spotlight on certain types of concerns within our industry who countenance the employment of the kind of men that we know are destroying this business for such members who are trying to operate in a proper way."

Charles M. Van Dyne, vice president, American Disinfecting Co., Sedalia, Mo.: "I have read with interest the article entitled 'What's Wrong with Sanitary Supply Selling' in the March issue of SOAP and unfortunately for the industry, it must be admitted that this article is correct.

In the writer's opinion the only way to cure these ills of the industry is for all firms, large or small, to fully realize their costs and to place their selling price at a high enough figure to enable them to do a constructive selling job rather than a destructive selling job and at the same time, pay commission which will attract and hold worthwhile salesmen. A high turn-over in a sales organization is extremely costly and at the same time is extremely detrimental to the entire industry. I believe articles of this kind which definitely bring the ills of the industry to its attention, will prove extremely beneficial to all."

Ellis Davidson, president, Ellis Davidson Co., New York: "In reply to your letter of the 8th instant, I read with great interest your article 'What's Wrong with Sanitary Supply Selling' in the March issue of SOAP. This article covers in detail all my thoughts on the subject and I don't see where it can be improved upon.

There was one point that was not covered however, and that is that Sanitary Supply salesmen are selling a non-profit article to the purchaser, in consequence of which, when business is poor, buildings and institutions cut down on their porter service and economize on the use of cleaning material."

W. B. Eddy, president, Rochester Germicide Co., Rochester, N. Y.: "I think the article, 'What's Wrong with Sanitary Supply Selling' in your March issue of SOAP, is thoughtfully written. Possibly the writer of the article attempted too much in tackling all of the imperfections in the business. In my humble opinion, some of the conclusions which he drew and the remedies which he offered are not entirely sound.

I do not consider it extraordinary that the history of our type of business shows that some salesmen, both good and bad, leave their employers and go into business for themselves. This condition is not found alone in our field. It is found in practically any field of industry. It is by no means always due to poor treatment of the salesmen on the part of the employer. It may be due to ambition, initiative, desire for independence, assumption that ability to sell merchandise makes a man capable of handling all other phases of running a business.

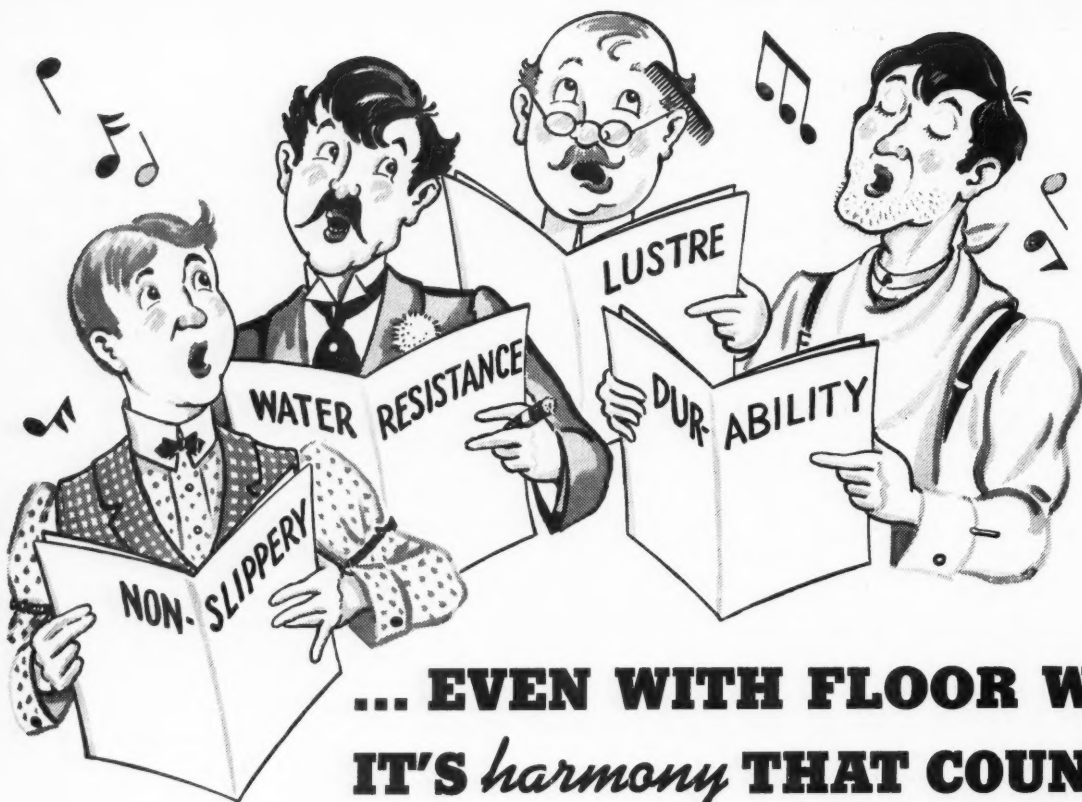
I take exception to the statement that 'few good salesmen stick in the sanitary products business very long.' We have not had that experience. In my 22 years of connection with this company, our experience has been the opposite. I would say that few poor salesmen stick in the sanitary products business very long. On the other hand, it is a rare thing in our experience for the good salesman to leave the business and the connection with us. We still have on the payroll our very first employed salesman, on a pension basis. Regarding the rest of our salesmen, I can vouch only for my 22 years of experience with the company, and I cannot cite a single instance of our losing one good salesman during that period. Given a fair break on a commission rate as a fair proportion of profit, on opportunities to earn extra for extra efforts, on participation in annual company profit, on opportunity for advancement or promotion based upon record, I see no reason why a good sanitary supply salesman should need to change jobs, to realize the good things in life.

The writer is correct when he says that too many men are started out with a sample case and a commission bulletin, with little education in what he is to sell. This is regrettable, although the good salesman will study his products and educate himself in a short time in this field, just as he would do in any other field. I note an even more serious weakness in many salesmen in our field. That is, that too many men depend upon their personality and their ability to talk for the purpose of making their sales. Too few study their goods, master certain ways of demonstrating them for the purpose of getting orders. Lasting and satisfactory business relations are more likely to be attained where the latter method is used. The customer is not so much interested in knowing what the goods are made of, what the color is, how they smell, as he is in having clean sanitary rest rooms, clean, attractive floors, etc., results which affect his property, or his job in maintaining that property.

The man who comes into the buyer's office and is able to show him, by demonstration, what results he buys in purchasing the goods, will make better sales, get more re-orders, than the man who relies solely upon verbal claims for the same goods.

Regarding the proposition of educating the smaller factories as to the need for the use of disinfectants and sanitary products, this is a process which has been going on for many years. Primarily, it has been conducted by the salesmen of companies in our business, supported by Boards of Health, U. S. Public Health Service, and more recently, by the National Association of Manufacturers. Of all these, the most effective agency is the salesman himself who can put over an argument much more effectively in person than can ever be expected from an argument printed in a paper or magazine, which may never be read by the prospect. For all the evils of which they have been accused, the salesmen of our industry have been a most effective educational source in promoting the use of its products.

It may be true that there are too many disinfectant salesmen, just



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On the floor, Candy's Bright Beauty rivals in appearance those waxes that let gloss or lustre take the dominant note. In fact, as we have said repeatedly: just put Bright Beauty on a prospect's floor . . . alongside a wax that has already proved "eminently satisfactory" . . . and you've practically clinched an order. (A statement we will gladly demonstrate to your satisfaction any time you give us an opportunity.)

Reasonably water-resistant, Bright Beauty will not milk in wet weather . . . withstands damp mopping, yet can be readily removed when it's time

to apply a new treatment. Bright Beauty is not excessively slippery . . . creates no difficulty in walking.

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Bright Beauty is sold through distributors *only** . . . never direct to the consuming trade. It is our unalterable policy never to compete with our jobbers. Packed in attractive containers under your own label. Competitively priced to allow your usual markup. Write for FREE experimental sample . . . try it under your own most rigid tests.

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as there are also too many salesmen in the field of life insurance, printing, advertising, raw materials, and almost every other field. To correct that condition, we have the alternative of federal dictatorial regulation of the business and all other businesses, from which may providence spare us, or we have the ageless natural elimination of the unfit by the able.

The writer refers to price cutting in the industry, which I consider to be in the same class as the statement about too many salesmen in the industry. This also is true of most businesses. When there is less general unemployment, there will be probably fewer salesmen trying to support themselves on straight commission by selling goods of the same general class to the same general trade. However, the able salesmen, and I suspect the writer of your article to be one of the best, will meet both those situations as they come up, by excelling his numerous competitors in demonstration of his products, in service to his customers. If he finds any certain lines becoming too competitive, he will shift his selling work over to those lines in which his company excels in value, and will continue making a substantial progress, regardless of price cutting on certain commodities by Tom-Dick-and-Harry."

H. Goodman, James Good, Inc., Philadelphia: "We regret we would be unable to offer you any comments on this article inasmuch as we do not sell the consuming trade direct and of course are not completely familiar with the problems of the men who are selling this trade.

Probably conditions could be improved considerably if the manufacturers selling the wholesale trade would not make all sorts of unfounded claims for their product. Naturally, the wholesalers are in turn going to make these unfounded claims to their customers which, of course, always leaves the customer dissatisfied, not only with that one product in particular but with all similar products also. Of course the basis of these unfounded claims does not always rest with the

manufacturer himself, but more than likely with the salesman representing the manufacturer who will do almost anything to get an order."

J. H. Bender, president, Clarkson Chemical Co., Williamsport, Pa.: "I read the article entitled 'What's Wrong with Sanitary Supply Selling,' and while I do not presume to know it all, I would say that the writer of that article knows what he is talking about. There have been very serious abuses in the selling end of sanitary supplies, and at the bottom of it lies the method of handling the sales organization and the system of remunerating the men on the road. However, this condition is a result rather than a cause.

From my observations, quite a number of firms in this line are suffering from lack of confidence in their own industry and consequently are not willing to invest anything in it, either for building up a sales organization, or for the development of new and better products. On the part of these firms, there has been a constant endeavor to get as much out of the business as possible and put back as little as they can.

That is why they have been willing to hire every Tom, Dick and Harry as long as his services could be obtained on a straight commission basis, regardless of what kind of a black eye such men might give the business through their inexperience or by deliberate dishonesty in many cases brought about by financial need on the part of the man.

Again, I do not presume to be an authority on the subject, but I started in this business back in 1920 as a warehouse man at the age of 18 and have been in the business ever since. During that period, I have taken an active part in every phase of the sanitary supply business, from manufacturing to financing and selling. The handling of men on the road, selling to the trade and in every executive capacity from the bottom on up. From these twenty years of experience, my answer to the problem of selling sanitary supplies is:

First: A trained sales force.

Men of experience and training who know what they are talking about when they approach a customer.

Second: A properly equipped sales force, with modern sales helps, snappy catalogues, and compact, practical sample cases. No bulky, excess, worn-out paraphernalia. A good automobile for transportation.

Third: A properly paid sales force. A drawing account check guaranteed every week to reach them without fail by Saturday morning, together with commission on sales over a stipulated amount within their ability to reach. Two weeks paid vacation.

Fourth: A properly coached sales organization, with a sales manager active in the various territories contacting the trade with the salesman at regular intervals. A visit by the head of the firm at least once a year and contact work with the salesman to keep in touch with conditions. Oftener if needed. A workable sales plan, a sales quota within a salesman's ability to reach. Extra commission for sales over quota. Sales contests, prizes. A sales convention or get-together at least once a year. Weekly sales coaching by mail from the sales manager. Free inexpensive novelties.

Fifth: Cooperation from the office and plant. All salesmen's mail answered daily. Effective follow up letters, samples promptly to customers when requested. A live mailing list of customers followed up at least six times a year with advertising direct to the trade, in support of the man in the territory. Copies of all correspondence.

Sixth: A yearly sales contract with old men, clause for complete territory protection. Credit for all business out of restricted territory whether by mail or direct from the man. Weekly report of sales. Six months allowance of time for new men to get a new or partially developed territory rolling. Same territory protection as old men. No pet house accounts held out.

Seventh: A cooperative plan on credits and collections.

(Turn to Page 127)

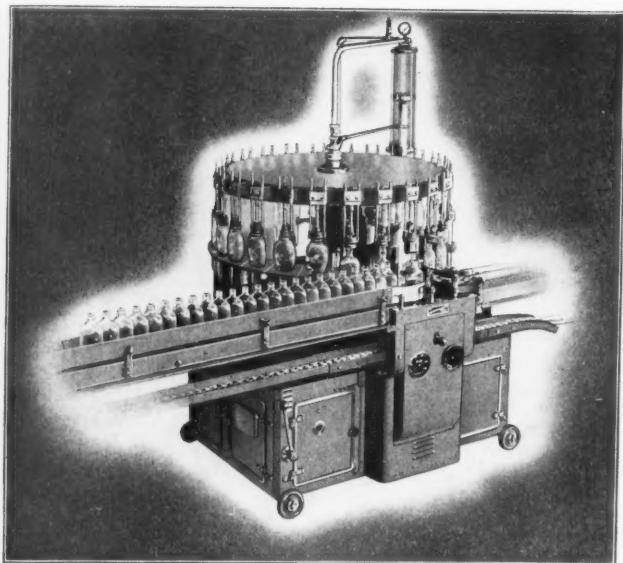
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Speed, speed, speed, at no sacrifice of accuracy—every hour of the day a steady stream of neatly filled bottles.

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The Karl Kiefer Automatic Rotary spells *perfection* because it is the result of fifty years' experience and development. Use it for all light, heavy, foamy or syrupy products—and get **MAXIMUM RESULTS AT MINIMUM COST.**

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TERMITE CONTROL

Termite Committee of National Pest Control Association Agrees Upon Suggested Procedure for Treatment of Infestations

THE Termite Committee of the National Pest Control Association, of which Walter Hill of Memphis, Tenn., is chairman, has just announced agreement upon certain fundamental principles of operation necessary for the control of termite infestations in woodwork and other materials in buildings. These steps, it is stated, have proven to be acceptable for all sections of the country. In detail, they are given as follows:

1—Structural Modifications

Direct contacts of untreated wood between wood members in the building and the soil must be broken by removal of the wood or placing it on concrete. The premises must be cleaned up and all loose wood debris, and other cellulose-bearing material must be removed from underneath or near the building, including stumps, wooden forms, wall board debris, etc.

All unexcavated earth must be removed to within 18 inches of floor supports (joists, beams and supports) of the building, or parts thereof, such as porches, etc. In the case of earth-filled porches, etc., it may only be necessary to remove the earth in the vicinity of the foundations by tunneling so that soil poisons may be applied under operation 2. Unless the concrete porch is reinforced, such tunnels should be braced temporarily with timbers to prevent collapse.

Cracks or grooves, or voids in mortar between masonry units should be pointed up, or, where practical, capped at the top with concrete; if this is not practical, such areas should be drilled and chemicals forced into them under operation 3.

Earth-like shelter tubes must be removed from foundation walls or piers. Mainly for the purpose of pre-

venting or stopping rot, proper ventilation must be secured underneath buildings, where there is no cellar or basement, namely, ventilating openings proportioned on the basis of 2 sq. ft. of net opening area for each 25 lineal ft. of exterior wall; the openings need not be placed in front of such buildings where they might be unsightly, but shall be arranged to prevent any "dead ends" or unventilated areas.

Where economically feasible in the case of frame buildings, there shall be installed a continuous course of non-corrodible metal, such as 16 oz. hard (C.T.) copper, zinc, or copper bearing galvanized iron of not less than 26 gauge on top of the masonry foundations. For interior foundation and interior faces of exterior foundations, this metal shield shall project at least 4 inches beyond the face of the walls and/or piers and 2 inches of this projection shall be bent downward at an angle of 45°. For exterior faces of exterior foundations, the shield may project only 2½ inches beyond the face of the walls and/or piers, of which 2 inches of the projection shall be bent downward at an angle of 45°. All seams in the metal course shall be of the lock-joint type, rolled down flatly at each connection. All corner seams shall be soldered. All vertical piping which enters the soil also shall be shielded in a similar manner. In general, metal termite shields are recommended for new constructions, since usually it is very difficult and costly to install them on buildings already constructed.

2—Soil Poisons

It is realized that at times the structural methods herein recommended are not practical from an economic standpoint. Soil poisons placed

about the foundations may be used as a substitute or as a supplement where reconstruction is not entirely practical. Effective toxic chemicals shall be applied in or on the soil around all walls or piers, chimneys, chimney sections, and the bases of heating units; also around all vertical piping which penetrates the soil, and at such other points where it appears likely that termites may obtain access to the building. The chemical should be toxic to termites, as permanent as possible, and should be one that when used with reasonable care will not be harmful to the human or animal life or contents of the building.

3—Drilling

In cases where it is possible for termites to pass through voids and spaces in or between foundation walls, piers, chimneys, etc., constructed of masonry units, an effective chemical barrier shall be forced into such voids and/or spaces.

3½—Flooding

In cases where the structural changes are impractical and foundation walls and/or piers are of especially poor construction, or in an unusually bad condition, an effective toxic chemical shall be injected between the top of the masonry and the wood member or members.

WITH the coming of Spring and the arrival of the active termite season, a further brush-up on control measures should be in order for pest control operators getting calls of this type. The U. S. Federal Housing Administration has recently issued a circular "Protection Against Termites" which covers the whole subject quite fully, giving advice on proper housing construction to make buildings termite-proof

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TODAY



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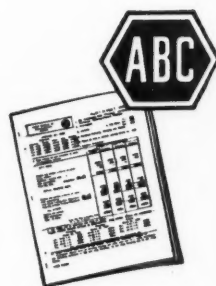
Today, A.B.C. reports reveal and analyze **NET PAID CIRCULATION**—the true measure of advertising value.

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Before you buy space in any publication, study the A.B.C. report carefully. Know what you're getting. Then buy—and get what you pay for.

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Ask for a copy of our latest A.B.C. report. It will give you quickly and completely the facts you want to know about the circulation of this paper.



SOAP and Sanitary Chemicals

**An A. B. C.
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A.B.C. = Audit Bureau of Circulations = FACTS as a yardstick of advertising value

as well as suggested methods of treatment in old structures after infestations have appeared.

The following corrective measures are listed, the selection of the exact method to be used depending of course on the particular conditions encountered in individual cases:

1. Infested Wood

(a) Inspect all wood below the line of the first floor. Borings or the insertion of a sharp instrument will disclose whether or not the wood is sound. If infestation has progressed far, wood will readily yield to pressure or hammer blow. If infestation has occurred over a period of several years, it also will be advisable to inspect woodwork above the first floor.

(b) If wood, especially structural members, has been weakened by termite activities, remove and replace with new material. If location or conditions require, replace with wood, pressure treated with a proper preservative. All wood removed should be burned.

2. Foundations

(a) If walls are cracked and porous and if built of hollow masonry units without a solid top course, shore up first floor, remove the top 6 or 8 inches of the foundation wall in sections and replace with high grade solid masonry or concrete. At the same time install metal termite shields under the wood sills as for new construction.

(b) If foundation walls are in good condition, shore up the first floor, remove mortar from under wood sills, install metal termite shield, and replace mortar bed.

(c) Cap post and pier foundations with termite shields.

3. Cellar Floors

(a) If in poor condition and improperly drained, remove existing floor, correct drainage and replace with properly constructed floor.

(b) If cracked, enlarge cracks and patch with dense portland cement mortar.

(c) Make joints between concrete floors and foundation walls and around pipes tight with coal-tar pitch.

(d) If wooden floors have

been laid over untreated wood sleepers, remove floor and replace with concrete or a correctly built wood floor on treated sleepers set on a concrete slab.

4. Basement Posts and Partitions

(a) Cut off wooden posts and partition studs 6 inches above the floor and install concrete bases. In badly infested areas, it is desirable to place a metal shield between the base and the wood above.

5. Pipes Through Basement Floor or Wall

(a) Place metal shields on pipes.

6. Doors

(a) If door frames extend into concrete floors, cut off frames 6 inches above floor and replace with concrete plinths.

(b) Protect outside doorframe and cellar hatchway with metal shield.

7. Windows

(a) If basement windows are of wood and sills are within 8 inches of finish grade or bottom of an area, lower the grade or area bottom to provide not less than 8 inches between ground and bottom of window sill.

(b) Basement windows close to grade should preferably be of metal sash in metal frames and have masonry or concrete sills.

(c) If basement is not adequately ventilated, consideration should be given to the installation of additional windows.

8. Wood in Contact with Ground

(a) If exterior trim and wall plates are near or are in contact with the ground, lower the outside grade to at least 8 inches below the wood. Change of outside grade should be done in a manner that will assure drainage of surface water away from the foundation walls.

(b) If concrete or masonry walk, drive or terrace has been built in contact with wood of an exterior wall, cut out the concrete or masonry and install metal termite shield.

(c) If porch work, lattice work, trellises and similar woodwork is in contact with the ground, lower the grade or cut off the wood to pro-

vide a space of at least 8 inches between the wood and the ground or replace with treated wood.

9. Basementless Spaces

(a) If floor construction above space is close to ground, excavate to provide at least 18 inches between the ground and joists and girders above.

(b) Remove all wood in the form of debris, tree roots, concrete form lumber and stakes that may have been left in this space.

(c) If ground is damp, provide proper drainage.

(d) Ventilate space by screened openings in walls as for new construction.

10. Termite Population

Generally this can be reduced by the use of soil poison, outside of foundations and in the earth of basementless spaces.

After corrective measures have been taken, frequent inspections should be made to make sure that the termites are not finding new entrance and that old entrances have been adequately blocked.

Infestation of a structure by drywood termites requires a different method of attack. The colony must be completely exterminated since these termites are not discouraged by the dryness of the wood and do not require access to the soil. Extermination can be accomplished by blowing poisonous dust into the galleries where the drywood termites are working or by application of other toxic material. Wood that has been seriously damaged by their activities should be removed and replaced with sound material.

Copies of the complete government bulletin may be obtained by writing to the Federal Housing Administration, Washington, D. C., and requesting Termite Control Bulletin No. 2.

Germicide for Telephones

A germicidal composition for telephones consists of chloramine-T, petroleum jelly and liquid paraffin approximately in the proportions of 200, 100, and 45 parts by weight, respectively. Telegene Proprietary, Ltd. Canadian Patent No. 387,011.



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CAUSTIC SODA
CARBONATE OF POTASH
CAUSTIC POTASH

Dry Mixing

(From Page 93)

the batch may be promptly and conveniently moved and the next batch put in place for mixing. The tub can be conveniently elevated and dumped into the hopper of the filler. This is particularly advantageous where mixer and filler are on the same floor.

This type has been employed for such dissimilar products as for example sweeping compound and bath salts. In the case of the former, reduced attrition is of little moment. In the case of the latter, if composed of straight sodium sesqui-carbonate suitably tinted and scented, the delicate crystals present a more inviting appearance. Handling and elevating of mixtures made up of crystalline and other coarse materials, is done usually by conveyors and bucket elevators. A better method finding constantly wider application is by means of an air blast.

Now to go back to impalpable powders. A few are successfully extending dry colors and small percentages of certain ingredients right in the mixer. The better procedure, however, appears to be to provide auxiliary equipment for the purpose whether or not the finished product is subsequently sifted.

Ball or pot mills still find wide application. For example, perfume can be intimately mixed with a part of the talc or magnesium carbonate in face powder in such a mill. Where pigment or lake colors are employed in a formula, they may be conveniently extended. Not only is the final mixing facilitated but the accuracy in color matching, as well. If a batch calls for $\frac{5}{8}$ ounce of a color, one-half pound can be rubbed up with $49\frac{1}{2}$ pounds of talc, or if not so intense, then five and 45 pounds respectively.

The operator then reads in his formula and weighs up 3 pounds $14\frac{1}{2}$ ounces, or $6\frac{1}{4}$ ounces, as the case may be, into his batch. Thus accuracy is also increased 100 or at least ten fold. For convenience in identification of such prepared in advance extended materials they may

be called, for example, red toner S. F. (meaning semi-finished) to differentiate it from the original color. The same principle may be applied to other dry blending operations.

If two or more basic colors are used to obtain the desired tint, they need not be separately prepared. They are all weighed into the extending material in correct proportions and milled together into one "semi-finished."

Where more than one product must be mixed in one mixer, careful planning will be helpful in establishing a cycle to minimize cleaning. Cleaning of the whole system, including mixer, filler, hoppers, etc., is tedious and time consuming, resulting in lost production time. When seven different shades of face powder were so handled, the cycle was started with the lightest and concluded with the darkest. Only one cleaning after the darkest was necessary.

After reasonably thorough cleaning, "blank", i.e., untinted powder was run through the system for final cleaning. After repeated use when it became discolored, it was utilized in a dark shade. Where scented and blued starch was produced in the same equipment with men's, flesh and untinted talcum powders, plain talc was used to facilitate cleaning. In this instance the talc was discarded after repeated use.

Automobile Polishes

(From Page 96)

film or road haze and makes a better lubricant when emulsified with water than it does alone. The liquid constituents serve as a carrier for the abrasive, which does a large part of the work, and make it much easier to apply. Some cleaners contain a slight excess of fatty acid:

	Per Cent
Tripoli	48
Kerosene	25
Tallow soap	7
Waxes	3
Free stearic acid	1
Water	16

Carnauba wax may be present, as in this product:

	Per Cent
Tripoli	30
Light mineral oil	9
Petroleum naphtha	21
Sodium stearate soap	2.5
Carnauba wax	4
Paraffin wax	2
Water	31.5

Some of the products contain wetting agents such as glycerine, and some use a gum as emulsifying agent instead of soap. There seem to be any number of imitations of polish types of compounds with the proviso that tripoli or amorphous silica is invariably present as the abrasive. While most of these products are pastes, a liquid can be prepared to serve the same purpose:

	Per Cent
Tripoli	30
Mineral oil	13
Castor oil	3
Sodium soap	0.5
Bentonite	1
Water	52.5

Another example of a liquid is the following:

	Per Cent
Amorphous silica	23
Light neutral oil	9
Blown castor oil	5
Glycerine	5
Soda soap	1
Gum tragacanth	0.5
Water	56.5

The pastes are usually applied with a damp cloth, the liquids poured on a dry one. Rubbing has to be continued until a smooth surface is obtained.

Wax Polishes

AFTER a car has been cleaned with a rubbing compound or road-haze remover of the type described, wax is applied to give a bright finish. These wax pastes may contain water or may be a simple dispersion of wax in organic solvent. The following is an example of the former:

	Per Cent
Petroleum naphtha	30
Mixed waxes	20
Soap	0.3
Water-soluble gum	0.2
Water	49.5

The wax mixture is usually composed of soft and hard waxes in varying proportions, sometimes a 1:1 mixture of two waxes or sometimes containing more than two waxes. Beeswax and paraffin are often used as soft waxes, carnauba or candelilla as hard waxes. Mineral waxes such as ozoker-



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ite are also used. A typical composition is:

	Per Cent
Mixed waxes	25
Petroleum naphtha	75

Dry cleaners' naphtha is the usual carrier for the wax mixture. A 1:1 mixture of paraffin and carnauba wax gives a good base. The carnauba wax is so hard that it would be difficult to apply as a smooth finish by itself, yet it will give the most lasting and brilliant finish of any of the waxes. Paraffin is a softening agent, giving a wax mixture that can be rubbed on. The naphtha being volatile, evaporates, leaving a film of wax which can be rubbed up to a high polish. It is very important not to apply too much wax. As with the oil, the film left on the surface should be as thin as possible. This is part of the reason why a mixture of soft and hard waxes is used. Waxing a car is no easy job, but one that takes several hours if properly done. Rubbing up the wax is a grueling task, but once done, a good wax finish is much more lasting than that obtained with cleaner-polishes. Theoretically a wax surface can be expected to last 6-12 months. Practically, it will last much longer if a car merely stands in a closed garage, but no doubt considerably less if the car is driven in traffic 6 or 8 hours a day.

A product having a high wax content can be made from the following:

	Per Cent
Petroleum naphtha	65
Paraffin or ozokerite	10
Carnauba or other hard wax	25

The ratio of soft wax to hard wax differs considerably in commercial products, some using a higher proportion of hard wax as in the above formula, others using as much as three parts of soft wax to one of hard wax.

Wax polishes are made very simply by melting the mixture of waxes together, just above the melting point of the higher-melting wax. The melted waxes are then mixed with the warm solvent with strong stirring. When thoroughly mixed, the batch is cooled quickly to give the smoothest possible dispersion of wax of fine particle size.

Advantages of a wax finish

are that it can be rubbed up a number of times with a dry cloth to renew the luster. Grease and oil do not stick to a waxed surface the way they do to an ordinary finish, so that the waxed car actually picks up less dirt than one not waxed.

In considering wax polishes for automobiles and their application, one may be struck by the similarity to volatile-solvent types of floor wax which require buffing and which have been so largely displaced by no-rubbing emulsion floor wax. It is natural that a good many people have thought that the principle of a self-polishing floor wax could be applied to an automobile wax. In spite of considerable effort, so far no one of whom we know has been able to develop a satisfactory self-polishing automobile wax. The products developed just do not give the required gloss. It is possible that the problem will be solved some time and that eventually a rubless auto wax will appear that gives a good gloss.

The discussion of polishes and cleaners for automobile finishes has been based on the lacquer type of finish. Some makes of cars are now finished with synthetic resin varnishes which are not lacquers in the sense that they are not based on nitrocellulose. However, the same types of cleaners and polishes are being used successfully on these cars as on those with lacquer finishes. The products described can therefore be said to have more or less universal application for the cars of today.

Wax Emulsions

Emulsions of thin consistency which dry to a glossy finish are prepared by melting carnauba wax and other waxes with the components of soaps, employing soap-forming or perfectly neutral emulsifying agents. Alkalies such as potassium carbonate, and caustic alkalies are unsuitable. These lacquer-like wax emulsions approach more closely in physical character to colloidal solutions than to ordinary emulsions. One reason for this statement is that when spread in a thin layer the emulsions are almost transparent. The only explanation is

that the extremely finely distributed wax molecules become associated with the soaps or emulsifying agents acting as protective colloids to form characteristic molecular complexes which may be present in true colloidal solution. Shellac or rosin is usually present to improve spreading and to prevent streaky drying, but is not indispensable. L. Ivanovszky, *Manufacturing Chemist* 11, 5-8, 14 (1940).

Insect Powder Labels

(From Page 101)

these cheap powders can under the Insecticide Act of 1910 be labeled "pure" as noted above. The fact that they may assay, and do assay 0.5 and 0.4 per cent pyrethrins, and even lower, is never mentioned in correspondence, invoice, or on the barrels.

Any manufacturer who buys this cheap powder under the impression that he is getting a material running 0.7 or 0.8 per cent pyrethrins, and without bothering with an analysis or a guarantee from his supplier, uses it in a powder and calculates his label on this higher basis, is going to have plenty of trouble with the Government. The same is true of the insecticide manufacturers who buy odd lots of pyrethrum powder of unknown origin here and there simply because it is cheap.

Instances of exhausted pyrethrum residue, used in liquid extract manufacture, which has been milled and offered as "Pyrethrum Powder, Fine Milled" have come to light recently. These cases of outright fraud have been investigated and verified, and showed to involve many thousands of pounds of fake pyrethrum powder. They have been represented as "distressed" goods or bankrupt stocks, etc. They present a neat trap for the unwary buyer seeking to buy at cheap prices, and emphasize the care which must now be exercised more than ever before.

Deodorant Powder

A deodorant powder contains zinc peroxide, kaolin, zinc oxide, talcum and precipitated chalk. C. E. Jamieson & Co. Canadian Patent No. 387,135.

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News.....

Chem. Wage Hearing April 12

A hearing has been called by the U. S. Public Contracts Board in Washington, D. C., for April 12, at which a start will be made toward determining prevailing minimum wages in the chemical and related industries for firms supplying materials to the government under the Walsh-Healey Act. (Under this act firms supplying materials to the government under contracts in the amount of \$10,000 or over must abide by certain minimum wage and maximum hour regulations. Editor's Note.) Classified along with the chemical industry at present are manufacturers of insecticides and fungicides.

McCormick Sales Up 12%

Sales of McCormick & Co., Baltimore, during 1939 showed a gain of 12 per cent over 1938, according to the report of Charles P. McCormick, president of the company, at the recent annual meeting. All officers were re-elected for the coming year.

Agkem to Sell "Fly-A-Way"

Agkem, Inc., Quincy, Ill., has recently been organized to market "Fly-A-Way," a stock spray, and other insecticides manufactured by Kalo Co., also of Quincy.

Comments on Pyrethrum Labels

George A. McLaughlin, president of McLaughlin Gormley King Co., Minneapolis, has commented in a communication to *Soap & Sanitary Chemicals* on an editorial published in the last issue, clarifying certain points on pyrethrum labelling which might be misunderstood by casual reading. He states: "In the editorial on page 91 of the March, 1940, issue, statements are made with respect to the deterioration of 'pyrethrum products.' A casual reading of this editorial would lead people packing pyrethrum-and-oil fly sprays to believe that they had to label their products with the pyrethrum content,

and, also, that their products are liable to deterioration. This is not the case, as you know. The new labelling requirements do not require the pyrethrin content on pyrethrum-and-oil solutions and such solutions do not deteriorate when packed in tin. The new labelling regulations apply, as I have no doubt you intended to state, to insecticide products containing powdered pyrethrum which does deteriorate."

Moves to Larger Plant

A. C. Exterminating & Chemical Corp., Cleveland, announces removal of its headquarters from Superior at E. 17th to 1603 St. Clair Ave., the third time in five years that they have doubled their office and manufacturing space. The new quar-

ters combine, on one floor, a large sales and display office, private offices, warehousing facilities, mixing room, loading dock and garage accommodations. The expansion program was necessitated two years ago, according to Larry McKenna, president of the organization, and also, National Chairman for the 1940 Convention of the National Pest Control Association, when the firm decided to enter the janitor and cleaning supply field. Today, the company is handling over forty items in this field.

Propose Free Cattle Dip

Cattle dips for eradication of ticks may be provided free of charge in the State of Mississippi under a bill (H531) just introduced in the State Legislature. They would be dispensed under the direction of the Mississippi Livestock Sanitary Board from vats built by the state if the bill becomes law.

Members of the insecticide group who occupied several tables at the annual dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, held at the Waldorf-Astoria, March 14, made no attempt to hide their identity. They are pictured by Charles Opitz of John Opitz Co., L. I. City, together with a group of flies, bed bugs, mosquitoes, roaches, etc., that Mr. Opitz had previously persuaded to pose. The bugs made good subjects, he said.





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Fire at White Tar Plant

The naphthalene refining plant of White Tar Co., Kearny, N. J. was completely destroyed in a spectacular fire the afternoon of March 20th which sent billowing clouds of black smoke eastward to darken the skies of lower Manhattan. The disinfectant manufacturing plant was also partially disabled and substantial quantities of raw materials and finished products were consumed in the fire that blazed for four hours before 65 firemen and seven pieces of apparatus finally got it under control. The fire which started in a naphthalene still was discovered promptly and the 60 workers escaped without injury. Safety devices on the stills prevented explosions, thus confining damage to the immediate locality of the naphthalene plant. The boiler house, the moth-proof garment bag plant, the moth specialty department, candle department and warehouses were not affected. Officials of the company state that arrangements have been made for other sources of supply on products affected and that deliveries will continue without undue delay.



Amer. Home Acquires Antrol

American Home Products Co., Jersey City, N. J., has just acquired Antrol Laboratories, Inc., Los Angeles, makers of "Antrol" for ant control. The Antrol unit will be merged in American Home's subsidiary, A. S. Boyle Co., and stocks of "Antrol" will be carried at all Boyle offices throughout the country. The Antrol staff will be retained and merged in the Boyle organization, selling the old Boyle line as well as "Antrol."

New Plant for Meyer

H. B. Meyer & Son, Dallas, Texas, manufacturers of soaps, polishes, disinfectants, etc., are building a new and completely modern plant at 1306 Canton St., Dallas, which will be ready for occupancy about June 1. The building is a distinct departure from the usual design for such plants and should be a very definite aid in the merchandising of the company's products. The floor of the main office and display room

which extend across the front of the building will be finished in tile, while private offices will use rubber tile in one and maple trim in another, giving the firm an opportunity to exhibit its floor materials to prospective customers under actual conditions of use. A glass partition will separate the office from the warehouse. Manufacturing will all be carried on in the back of the building, separated from the warehouse by another partition. The firm's present capacity will be tripled when it moves into the new quarters. The present offices are located at 1411 Camp Street.

Reject Femitect Trademark

The Femitect Co., Pittsburgh, was recently denied use of "Femitect" as a trademark for preparations for feminine hygiene and a deodorant in view of opposition by Bourjois, Inc., New York. Assistant Commissioner Frazer noted that the opposition of the Bourjois company was based upon registration of its trademark "Femina" and that "Femitect" was confusingly similar.

R. A. Bevernick Marries

Richard A. Bevernick, of R. J. Prentiss & Co., New York, was recently married to Miss Virginia Putnam, of Minneapolis. Mr. Bevernick is a graduate of the U. S. Naval

Academy, at Annapolis, class of 1937, and has been with the Prentiss company since July of that year.

Ruegg Heads Ultra Chem.

Soap erroneously reported last month that Donald J. Whalen, president of the Karith Chemical Co., Chicago, would be president of the new Ultra Chemical Co., floor wax manufacturer, which occupies a two-story building at 4432 South State Street, that city. Instead, Mr. Whalen will act as secretary and Dr. Henry Ruegg will be president. Other officers are Henry Geering, vice-president, and William H. Spuhler, treasurer. Dr. Ruegg is vice-president of the Ultra Chemical Works, Paterson, N. J., parent company to the Chicago concern, and Mr. Spuhler is president of the parent company.

Disinfecting Corp. to Move

Disinfecting & Exterminating Corp. and its affiliate, Deco Products Co., New York, will shortly move into new quarters now under construction at 419 West 126th Street. The new plant and office building, with a frontage of 30 feet on 126th Street and running 140 feet in depth to 127th Street, is expected to be ready for occupancy April 15, according to Col. Leopold Philipp, president of the two companies.



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New Disinfectant Research

Funds for two scientific research projects were appropriated at a meeting of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers, held at the Hotel Roosevelt, New York, on March 14th. Both projects were adopted after recommendation by W. B. Eddy, president of the Rochester Germicide Co., Rochester, N. Y., and chairman of the Research Program Committee of the Association. An introductory search of the literature covering studies and the need for disinfection will be undertaken at the Medical School of the University of Rochester. This preliminary study will be followed by direct disinfectant research later. Work on development of tests for evaluating insecticides against crawling insects will be carried on at Ohio State University, beginning June 1st, for a year, under the direction of Dr. F. L. Campbell.

Sanitary Supply Sale Easy?

It is one of the misfortunes of the sanitary supply business that prospects are too plentiful and selling, of a kind, too easy, according to an editorial in the current issue of *Sniffs, Smudges and So Forth*, house organ of Fuld Bros., Baltimore. Because this is true, it is pointed out, the trade generally overlooks the need for real selling efficiency. A man who could not survive in other industries is often able to make his way selling sanitary supplies, simply because of the universal need for such products and the generous supply of prospects. The industry could well get along without such salesmen, it is observed, but they will continue to hang on so long as inefficient selling methods of established dealers leave them an opening.

Gustav A. Brenke Dies

Gustav A. Brenke, pharmacist for the Lambert Pharmacal Co., St. Louis, died January 14 after an illness of five months. He was 74 years old, and prior to joining the Lambert Co. in 1927, had been associated at one time or another with the Melba Co., Jewel Tea Co., and Fuller Mor-

At their meeting, the Governors also heard interim reports from various committees, and an outline of plans for the mid-year meeting to be held at Lake Wawasee, Indiana, on June 17, 18, and 19, from N. J. Gothard of Sinclair Refining Co., general convention chairman. Discussions also covered labeling of pyrethrum insecticides and specifications of various government departments for insecticides. Those who attended were: President, W. J. Zick of Stanco, Inc.; J. N. Curlett of McCormick & Co.; H. A. Nelson of Chemical Supply Co.; G. M. Baird of Baird & McGuire, Inc.; J. L. Brenn of Huntington Laboratories, Inc.; N. J. Gothard of Sinclair Refining Co.; H. W. Hamilton of White Tar Co.; John Powell of John Powell & Co.; Dr. E. G. Klarmann of Lehn & Fink, Inc.; C. L. Weirich of C. B. Dolge Co.; R. H. Young of Davies-Young Soap Co.; Ira P. MacNair of MacNair-Dorland Co., and W. B. Eddy.

Wholesale Drug Co., developing cosmetics and pharmaceutical products.

Plan Pest Control Films

Preparation of a twenty minute sound movie dramatizing the need for fumigation in pest control is currently under consideration by The American Film Center, 45 Rockefeller Plaza, New York, under the sponsorship of the National Pest Control Association. The proposed film would give for public consumption a picture of the manner in which a professional fumigation job is carried out, showing how tenants and building employees must cooperate with the fumigator, and emphasizing that such jobs can be carried out with complete safety under the direction of competent operators. Under the proposed plan prints of the 16mm film would be available at \$50 each for pest control operators.

Midwest Laboratories Move

Midwest Laboratories have moved from 327 Pine St. to 1014 South Cardinal, St. Louis.

McCormick Wins Award

Packages of McCormick & Co., Baltimore, for their line of foods and household products won a major award in the Family Group Section of the All-America Package Competition held recently under the sponsorship of *Modern Packaging*. Packages for the McCormick line have recently been redesigned to feature the trademark "Mc" on every item in the line.

New Givaudan Disinfectant Base

Givaudan-Delawanna, Inc., New York, has recently developed a new disinfectant base known as "Cidan No. 1," said to be a mixture of methyl, ethyl and isopropyl cresols, having a slight cresylic odor, but free from sulfur odors and milder than cresylic acids. The company claims that the new disinfectant base is approximately five times as powerful a germicide as the commercial cresylic acids generally used in the manufacture of emulsifiable and soluble type disinfectants. "Cidan No. 1" is not intended for use in specification disinfectants of the National Association of Insecticide & Disinfectant Manufacturers, nor in those of the Department of Commerce, according to its manufacturer, but is designed for use in specialty disinfectants where low cost, mild odor and a moderate phenol coefficient are required. It is further claimed that disinfectants made from the new base can be scented to give a definite aromatic note, and that the base itself is readily emulsified in the usual soaps.

Nopco Reelects Gulick

Charles P. Gulick, one of the founders of National Oil Products Co., Harrison, N. J., was recently elected president of the company after a two year absence from the post. Mr. Gulick, who left the presidency in 1938 to become chairman of the board, will continue to serve in that position also. He succeeds John H. Barton who retired as president on March 1st. Other officers reelected were: Perc S. Brown, G. D. Davis and Thomas A. Printon, all vice-presidents; Ralph A. Wechsler, treasurer, and A. A. Vetter, secretary.



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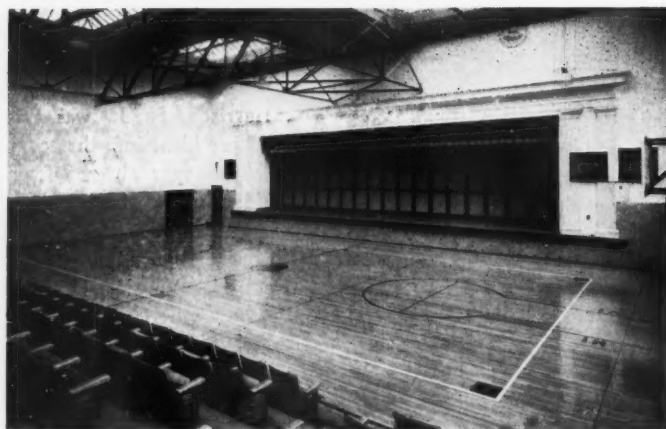
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New Insecticide Book

"The Chemistry and Toxicology of Insecticides" by Harold H. Shepard, Ph.D., Assistant Professor of Entomology and Economic Zoology at the University of Minnesota, has recently been issued by the Burgess Publishing Co., 426 So. Sixth Street, Minneapolis. The book is printed multigraph style, 8 x 11, 383 pages, with flexible imitation leather cover, \$4.00. It is stated to be the first complete volume given over solely to the subject of insecticide toxicology. After a discussion of the history of insecticides and the principles of insecticide toxicology, it covers the poisonous materials, arsenicals, fluorides, copper compounds, etc. Two chapters are given to the subject of contact insecticides and adjuvants, and a 64-page chapter to plant insecticides such as derris, pyrethrum, nicotine, in which are included various synthetic materials. The subjects of insect fumigants, attractants, repellents, and testing are also covered. References are numerous throughout the book. A really fine compilation of both technical and commercial insecticide information. Recommended to all technical men in the insecticide industry, both agricultural and household divisions.

Story on Rotenone

An article "The Story of Rotenone" has recently been prepared by D. B. Faloon, Hammond Paint & Chemical Co., insecticides, Beacon, N. Y. For those unfamiliar with rotenone, the story provides interesting reading, describing the source of the material and methods of processing. Close attention is given to the change in the method of milling, which several years ago was done by the use of "impact" mills. Milling in this way caused intense heat, and since rotenone is an organic material and easily injured by heat and oxidation, its killing power was decreased by such processing.

To prevent such breakdown, specially designed "roller" type mills are now used which break up the root fibres without creating excess heat. In concluding his story, the author men-



Among the exhibitors at the convention of the International Beauty Parlor Operators held at the Hotel Pennsylvania, New York, the week of March 4 to 8 was Clifton Chemical Co. They displayed their line of products for the beauty supply trade. Alfred Zody (left) of Clifton's New York sales staff, and Lou Norian of Boston were in charge of the Clifton booth. "Shampine" was featured.

tions the addition of "sticking," adhering and wetting agents to the milled product to assure better anchorage and better killing-power.

Dow Executive Honored

James T. Pardee, chairman of the board and vice-president of Dow Chemical Co., Midland, Mich., was

honored last month by the Case School of Applied Science, Cleveland, with the honorary degree of doctor of commercial science. Mr. Pardee is a graduate of the Case School where he earned the degree of Bachelor of Science in Civil Engineering.

Lehn & Fink Earnings

In a letter to stockholders of Lehn & Fink Products Corp., Bloomfield, N. J., Edward Plaut, president of the company, reported a net profit for 1939 of \$624,661.02, equivalent to \$1.56 per share on 400,000 shares of capital stock outstanding.

Metal Polish

Many constituents of metal polish being hard to obtain under the present circumstances, formulas are kept as simple as possible: Five parts of curd soap are dissolved in 40 parts of boiling water with the addition of 20 parts of a 5 per cent paste Tylose. This mixture is worked up with 15 parts of kieselguhr and 10 parts of tripoli, after which 10 parts of denatured alcohol are mixed in. The fineness of the abrasive can be coordinated with the viscosity of the liquid. *Seifensieder-Ztg.* 67, 24 (1940).

W. F. Reis, chief perfumer for van Ameringen-Haebler, Inc., New York, tagged as a "super-sniffer" by The American Magazine, was pictured in their April issue exercising what was described as one of the keenest noses in America. Photo courtesy L. Aarens and The American.



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INCORPORATED

127 Maiden Lane New York, N. Y.

*Manufacturers for More
Than 50 Years*

SUPERIOR QUALITY DEWAXED ORANGE SHELLAC

DEVELOPED ESPECIALLY FOR
USE IN NO RUBBING WAXES

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- *Dissolves Readily*
- *Low in Acid*
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WE ALSO OFFER:

DEWAXED WHITE REFINED
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Samples Upon Request

TRY THESE WITHOUT OBLIGATION
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FACTORY: RAHWAY, N. J.

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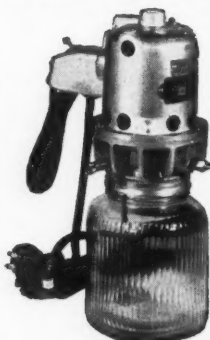
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BREUER TORNADO ELECTRIC SPRAYER

Easier Sales—More Repeat Orders

New! Model 53G

**Lowest Priced TORNADO
Ever Offered**



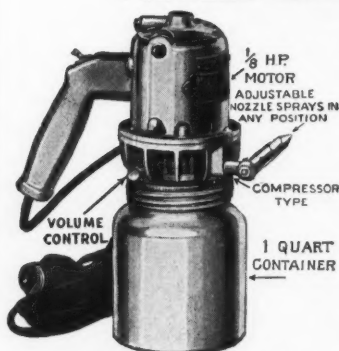
A new high quality compressor-type electric sprayer, selling at a sensationally low price, to help you reach the small users who could never before afford a really good sprayer. Ideal for groceries, restaurants, meat markets, taverns, hotels, rooming houses, etc. G. E. motor, genuine rotary compressor, stationary nozzle, wood pistol grip handle, 25 oz. glass container.

AUTOMATIC MODEL 54

One quart capacity. Set the automatic time switch at any point from 1 to 30 minutes—sprays desired quantity without further attention—automatically shuts off. Can also be used as a hand spray. Adjustable nozzle sprays in any position. Exclusive volume control regulates density of spray.



POPULAR MODEL 53



Our finest compressor-type electric hand sprayer. 1/8 H.P. G. E. Motor, genuine rotary compressor, adjustable nozzle for spraying in any position, exclusive volume control. Beautifully finished castings, one quart container. A compressor - type sprayer of the finest quality at moderate price.

ALSO

TORNADO Model 36 with automatic time switch, one gallon capacity
TORNADO Model 6 for mill spraying and moth proofing solutions
TORNADO Models 50 and 51 Fan Type units for crawling insects.

Write Today for Complete Information

Breuer Electric Mfg. Co.

5118 N. RAVENSWOOD AVE.

CHICAGO, ILLINOIS

*We do not sell insecticides. Our business is manufacturing Sprayers.
Patented in U. S. A. and Foreign Countries.*

Protests Restrictions By Equipment Makers

PROTESTING against manufacturers of equipment, especially machines for cleaning and maintenance, who specify that their soaps or cleaners must be used or they will not "guarantee" their machines, and also applying the same protest to linoleum manufacturers in the case of floor waxes, Adrian M. Turner, of the Globe Sanitary Supply Co., Los Angeles, has the following to say:

"Your editorial in the March, 1940, issue, relating to the policy of a large manufacturer of floor coverings who guarantee their own waxes and none other, has brought up a practice that is virtually sweeping the country among manufacturers of maintenance equipment. It is a vicious code and what the answer will be in the final analysis, no one is able to say.

Here, in our city, a large manufacturer of steam cleaning machines for washing automobile and truck chasses, formerly stated that any responsible firm who manufactures powdered alkali cleaners, would be permitted to use these in their machines. About six months ago, this company began manufacturing their own cleaners and they will no longer guarantee their machines unless their own cleaners are used.

There are several companies manufacturing degreasing machines who will not permit any company to sell trichlorethylene to be used in their machines, but slap a label of their own on a drum of this chemical and will not guarantee their degreasing machine unless the consumer buys the trichlorethylene from them under their own branded name at a fancy price.

To combat this practice, many of the manufacturers of maintenance materials, in this city, are telling the consumer to forget the machine manufacturer's guarantee and these guarantees are being underwritten by the company who sells janitor supplies. If the consumer who buys a steam cleaning machine will buy our cleaner, instead of the cleaner manufactured by the company who manufactures the machine, we will undertake to service the machine for the length of time that the consumer uses our materials.

So what is happening? We are buying pumps and boilers and are having them assembled into a steam cleaning machine. We have been

forced to go into manufacturing this class of heavy equipment.

To combat the evil of the degreasing machine, we have successfully contracted with a local firm to make a machine for us to our specifications. We have had a good deal of success with these two types of machines and as the local consumer is loyal to the manufactured products of this city, it is an easy task for us to fight this kind of competition. And we place no restrictions upon the purchasing of cleaner for these machines. The consumer or user of these degreasers can buy his trichlorethylene from whomever he chooses, and we service the machines regularly.

To overcome the floor covering situation, there is a manufacturer of linoleum in this city who will recommend floor waxes of local manufacture. In return, whenever any local wax manufacturer hears of a new building being constructed or a new installation of linoleum or asphalt tile, we immediately contact the builder, and the local manufacturer of linoleum in nine cases out of ten gets the job. Then our wax is used.

If janitor supply manufacturers throughout the United States follow this program, it might make some of these manufacturers of equipment reconsider the foolish step of trying to mix oil with water. Let the equipment manufacturer sell machines and we will manufacture specified materials to use with them.

It would be a fine state of affairs if General Motors would not extend to the buyer a new car guarantee of 90 days if "G. M." gasoline were not used in his Chevrolet. If this policy is carried to completion, the company who produces metal sprayers would not guarantee their own sprayers unless the consumer used a fly spray of the same manufacture as the sprayer. And this could be carried on indefinitely. Now is the time to fight it!"

Exhibit At Flower Show

Maintaining booths at the recent 27th Annual Flower Show at the Grand Central Palace, New York, were several firms in the sanitary chemical field. Among them were Soilicide Laboratories, Upper Montclair, N. J., with an attractive booth displaying various "Tat" products,

ant baits, roach traps, roach powder, moth-proofing compounds, etc. Andrew Wilson, Springfield, N. J., displayed "Jap-Ro-Cide" for the control of Japanese beetles. The company also showed other insecticides for plant use. "D-X," a pyrethrum and rotenone spray for various insects, was exhibited by B. G. Pratt Co., New York, while a complete line of sprayers and dusters were shown by H. D. Hudson Mfg. Co., Chicago. A large attendance greeted the booth maintained by Guarantee Exterminating Co., New York, which showed by illustrations the life cycle of the termite. The booth also contained a model house with the outer part of the structure removed, showing termites attacking the home. California Spray-Chemical Corp., Elizabeth, N. J., displayed its "Ortho" dog repellent known as "Scram," and also showed an ant poison "Ant-B-Gon." Other firms in the sanitary chemical field maintaining booths were Rose Manufacturing Co., Philadelphia, with its "Tri-ogen" insect spray; Alfred Field & Co., New York, with insecticide cartridges, and Protex Industries, Inc., New York, with a display of various "Protex" sprays.

Stearns Earnings Down

Frederick Stearns & Co. and subsidiaries, Detroit, chemical manufacturers report a net profit of \$170,072 for 1939, equal to 81 cents on each of 132,840 shares of no-par common stock as compared with a profit of \$198,534, or \$1.01 a share, in 1938.

Forms New Chemical Co.

William B. Lawson, formerly with Harshaw Chemical and International Nickel Companies, in sales capacities, has just announced the formation of W. B. Lawson, Inc., Union Commerce Building, Cleveland, to deal in industrial chemicals, oils, and non-ferrous metals.

Sunbeam Products Co. Moves

Sunbeam Products Co., janitor supplies, Syracuse, N. Y., has moved to new and larger quarters at 509 East Washington Street.

Quality SHELLAC

**FOR BETTER
NO RUBBING WAXES**

**No. 65 EXTRA WHITE REFINED
BLEACHED SHELLAC**

**No. 66 D. C. REFINED
BLEACHED SHELLAC**

**No. 67 DEWAXED ORANGE
SHELLAC**

Will Dissolve Quicker and Require Less
Alkali Thereby Producing More Durable,
More Waterproof and Higher
Gloss Finishes

Working Samples Sent Upon Request

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Philadelphia, Pa.—Frances Patterson
Chicago, Ill.—Harry Holland & Son, Inc.
Baltimore, Md.—William McGill
San Francisco—E. M. Walls
Danbury, Conn.—J. E. Pike
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TAR ACID OIL *for use in* DISINFECTANTS

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Producers and Refiners of Coal Tar and Its Products.

THE MODERN AIR FORCE PLUNGER

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This new plunger is the most effective ever developed for all types of plumbing fixtures and drains. Users tell us it has done an excellent job where old type plungers have failed completely.

Start now to save your customers time and money by showing them the Air Force—it sells on sight or simple demonstration. Start now to cash in on the larger profits available by selling the Air Force. Write for further details.

Manufacturers of Sanitary Specialties and Soap in all its Forms. Write for Prices.

CHICAGO SANITARY PRODUCTS CO.
3100 S. THROOP STREET CHICAGO, ILL.

Canadian Insect Studies

The investigation and study of insects that attack fruit, live stock, stored products and household products are all covered in a report of the Canadian Department of Agriculture for the year ending March 31, 1939. During the course of the year, reads the report, tests showed that lead arsenate, pyrethrum, derris, cryolite and phenothiazine are all compatible with the comparatively new fungicide, flotation sulfur. Work carried out on European red mite showed that summer sprays of derris and cube were ineffective in controlling this insect without the addition of a suitable adjuvant.

The oil and arsenical schedule is still proving superior to all others in the control of the codling moth, continues the report, and tests have shown that the oil, besides acting as a sticker for the arsenicals, is of great value as an ovacide. Tick studies by the department's laboratories are growing in importance, not only on account of a large increase in the tick population, but also because of an increase in animal and human diseases attributed to ticks. Further tests with mosquito repellents, says the report, have confirmed the superiority of pyrethrum extract and oil of thyme in a carrier such as castor oil or olive oil over other preparations used.

Of the insects attacking stored products, the spider beetle was the most important during 1938, but through regular and systematic use of control measures recommended by the Department of Agriculture, losses were reduced. Work of the department on household insect pests during 1938 consisted largely of answering inquiries concerning various species troublesome in dwellings, identifying specimens, and preparing matter for publication.

Moth-proofing Composition

Moth-proofing compositions are manufactured by reacting 1 molecular proportion of cyanurtrichloride at first with 1 molecular proportion of 2-amino-4,4'-dichlorodiphenylether-2'-sulfonic acid, secondly with 1

molecular proportion of 3,4-dichloroaniline, and finally with 1 molecular proportion of 2,4-dichlorophenol-6-sulfonic acid. J. R. Geigy S. A. Canadian Patent No. 387,255.

SASSAFRAS ODORS . . .

Outstanding in the field of low-cost odors for many years have been sassafras and other camphor oil derivatives . . . outstanding as an authority in their production over the years has been Dr. Francis D. Dodge, chief chemist for the Dodge & Olcott Co. He writes on camphor oil and its derivatives in the next issue of *Soap & Sanitary Chemicals*.

Sanitary Supply Selling

(From Page 107)

By operating on a program of this kind, salesmen turn-over is very small. However, it has been our policy to discharge promptly any new man whom we decided did not have the qualifications after giving him a fair trial. We have had no trouble with order padding, high pressure or dishonesty on the part of our salesmen, hired and handled on this basis.

We have also found that the cost of operating a sales force on this basis is considerably less than on a so-called straight commission basis. Our experience with straight commission in years past has been one of continuous overdrafts and subsequent losses. The men who survived had no organization spirit. They were free lances ready to go for themselves as soon as they had the opportunity. The cost was at least twice as great as with our present system. The only place where straight commission fits in at all is with part-time men, or side line men and as a general rule side line arrangements seldom are productive of much business.

To combat the negative attitude towards sanitation which exists in some places, we count on our periodical mailing campaign to customers and the educational work along this line by our men. There is a great deal of work to be done along this line and possibly the answer is a campaign by

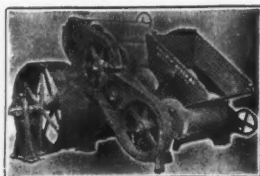
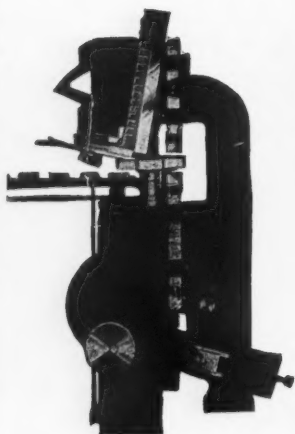
the National Association, financed by the combined resources of its members.

On the whole subject of marketing sanitary supplies, I take a very optimistic view. We are part of a young and rapidly growing industry. Constant change is part of our progress. New and better products to introduce regularly make the job more interesting and offer more opportunities than many other lines of endeavor. Chiselers, price cutters and low-priced low-grade products will continue to be our headaches, but the survivors in the sanitary supply field will be those firms which conscientiously strive for better products, better service and a thorough understanding of their customers' needs. To accomplish this, a well trained, properly equipped, properly paid, cooperative sales-force is the first essential."

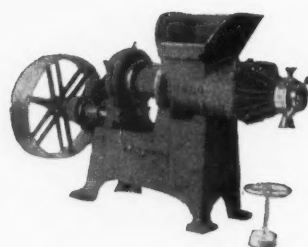
Entomologists Meet at Purdue

The 19th annual conference of the North Central States Entomologists was held at Purdue University, Lafayette, Ind., March 21 and 22, with Prof. J. J. Davis of Purdue acting as general chairman and some 200 entomologists and pest control operators registered for the two-day session. Following the opening session on the first day, the group divided for three sectional meetings dealing with Vegetable, Garden and Greenhouse Insects, Stored Products Insects and Plant Resistance. At the annual banquet that evening the group saw a film dealing with the pest control industry shown through the courtesy of Henry Turrie, Milwaukee pest control operator. The Friday morning session was a joint one with the pest control operators. The discussions were concerned with correlating the work of the entomologist with the commercial operator. Following the close of the session, a two-day Grasshopper Conference sponsored by the Federal Bureau of Entomology and Plant Quarantine was held. Announcement was made that the 1941 conference will be held the latter part of March at the University of Missouri.

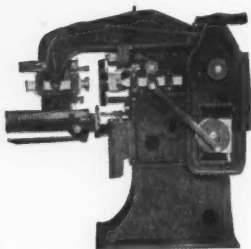
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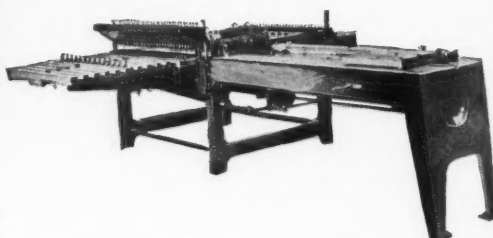
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This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



4 JONES AUTOMATIC
combination laundry and toilet soap presses. All complete and in perfect condition.



2 Automatic Power Soap Cutting Tables.

Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

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for 2 lb. and 5 lb. Packages guaranteed in perfect condition.

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H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
Empire State, Dopp & Crosby Foot Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Power slabbers.
Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
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H-A 6, 8 and 10 inch Single Screw Plodders.
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Filling and Weighing Machine for Flakes, Powders, etc.
Steel Soap frames, all sizes.
Steam Jacketed Soap Remelters.
Automatic Soap Wrapping Machines.
Glycerin Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
Perrin 18 inch Filter Press with Jacketed Plates.
Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
Day Grinding and Sifting Machinery.
Schultz-O'Neill Mills.
Day Pony Mixers.
Gardiner Sifter and Mixer.
Proctor & Schwartz large roll Soap Chip Dryers complete.
Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
Day Talcum Powder Mixers.
All types and sizes—Tanks and Kettles.
Ralston and H-A Automatic Cutting Tables.
Soap Dies for Foot and Automatic Presses.
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Send us a list of your surplus equipment—we buy separate units or complete plants.

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Positions Wanted

Chemist: 13 years experience in development of shoe dressings, blackings, cleaners, etc., rubless waterproof wax finishes for floors, soaps, bleaching agents, and detergents. Latest emulsion practice. Executive ability. Gentile, age 34. Employed. Address Box No. 784, care *Soap*.

Chemist—Young chemist background organic research desires new position in plant or laboratory. Willing to break in at bottom. Some experience drug products. M.A. University of Chicago. For further information, write to Box 795, care *Soap*.

Position Wanted: Chemist engineer with several years experience managing soap plant. Familiar with production of shampoos, scrub soaps, soft soaps, etc. Desires position in soap plant. Address Box No. 792, care *Soap*.

Entomologist, Ph.D.; with twenty years background in all branches of profession and broad research experience in insecticidal field, particularly with household sprays, is desirous of connection with commercial concern, which will offer advancement and other opportunities not afforded by present position. Address Box No. 790, care *Soap*.

Sales Representative: Man with following on Pacific Coast desires to represent manufacturer of fine and medicinal chemicals in that territory. For further details communicate with Box No. 791, care *Soap*.

Chief Operator, typist, clerical work, well-known and familiar with drug and chemical trades. Good diction. Desires position with reliable firm. Splendid references. Will go anywhere. Female. Address Box No. 782, care *Soap*.

Sales Representative: Man with a thorough knowledge of the sanitary chemical industry, having a splendid following in the eastern and central states, catering to the hotel, restaurant, bar, paper and janitor supply jobbers. Willing to operate on a small drawing account against commissions. Address Box No. 786, care *Soap*.

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Get a guaranteed reconditioning job, prompt shipment and save both time and money!

SELECTED SPECIALS

- 1—Sargent 54" x 72" single Chilling Roll.
- 2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single cooling roll.
- 1—Jones Vertical automatic Soap Press.
- 1—Jones Horizontal Automatic Soap Press.
- 3—Houchin Plodders, 10", 8".
- 2—Pneumatic Scale Carton Packaging Units.
- 2—Automatic Soap Wrapping Machines.

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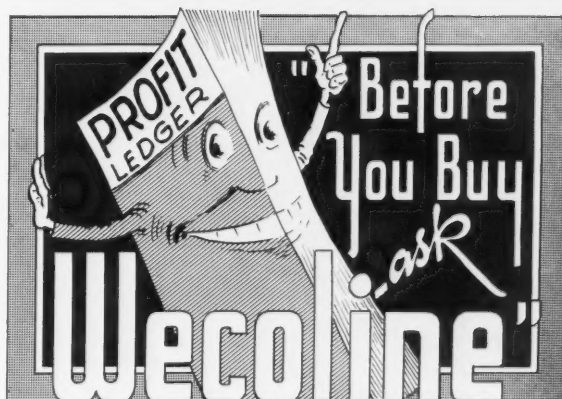
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A recent, complete and authoritative text,—
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A FINE PERFUME OIL FOR SOAPS
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No. 1N Wall Type

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All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

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Soap Maker and Chemist with long experience in the manufacture of all kinds and grades of soaps and soap products. Address Box No. 787, care *Soap*.

Chemist—with several years experience as chief chemist of large soap and glycerine manufacturers desires superintendency of medium-sized plant. Address Box No. 794, care *Soap*.

Soapmaker—man with ten years practical experience in manufacture of toilet soaps, soap powders, soap specialties, desires new connection, preferably in or near Chicago or on the west coast. Good record; best references. Modern salary. Address Box No. 780, care *Soap*.

Chemist, Ph.D.; many years practical experience in soaps, oils, fats, cosmetics, textile chemicals, etc., desires suitable connection. Address Box No. 796, care *Soap*.

Positions Open

Wanted: Salesman calling on industrial trade to sell DAN-DEE Waxes; commission basis. Write for full particulars. Address Box No. 783, care *Soap*.

Miscellaneous

Live Insects, larvae, displays; insect life-histories, collections, moth larvae model, sale aids. Write for literature. New York Scientific Supply Co., 113 East 22nd St., New York City.

For Sale: J. H. Day size C mixer and sifter, 400 lb. capacity. Enamel in good condition end bottom discharge, belt driven. B. K. Williams Co., East Stroudsburg, Pa.

For Sale at Auction Price: 2 McDonald automatic labelers; 28" Schultz O'Neill, Williams and Munson mills; Houchin Aiken 4" plodder; 36x36" filter press. First Machinery Corp., 837 East 9th St., New York City.

Liquidation from Soap Plant: Jones automatic soap press; foot presses; Proctor soap dryer; 4 roll stone mill; Johnson carton sealers; automatic powder fillers; crutchers; plodder; 6 knife chipper; cutting table; frames; filter presses; mixers; boiling kettles; etc. Send for Liquidation Bulletin No. 402. Stein Equipment Corp., 426 Broome Street, New York City.

We Want to Buy Cans—Discontinued Flit style—pints and quarts—lithographed or plain. Address Box No. 789, care *Soap*.

Mr. Jobber:

HERE IS YOUR COMPLETE LINE OF

COLE-SPEED

Moth Preventatives

Blockettes

Crystals

Sprays



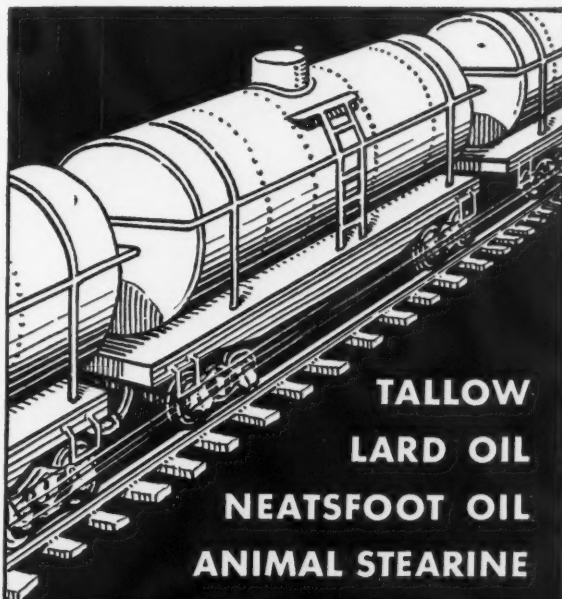
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SPECIALTIES

SELF POLISHING WAX
(UP TO 20% SOLIDS)
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LIQUID FURNITURE POLISH
INSECTICIDE SPRAYS
WEED KILLER (LIQUID)
FIRE EXTINGUISHING LIQUID
SODA AND ACID RECHARGES
DIP MACHINE FLUID
TOILET BOWL CLEANER
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NEW SAVINGS

THREE TIMES THE WEAR with this new applicator means a big saving for you and a new stimulant for your floor finish sales. Every square inch of the washable wool pad can be used. It has no metal that will mar the most delicate surfaces. Expert construction and best materials assure uniform spreading of all types of finishes on all types of floors. Be the first to show this sensational new development to your customers. Write today.

Send for Samples and Literature

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2509-13 S. Green St. Chicago, Ill.

INCREASE YOUR SALES

with

Buckingham

WAX SOAP CLEANER
NO-RUBBING LIQUID WAX
PREPARED LIQUID WAX
(Polishing type)
PREPARED PASTE WAX
POWDERED DANCE WAX
RUG AND CARPET SHAMPOO
WHITE EMULSION FURNITURE POLISH
FLOOR CLEANER AND BLEACH
BOWLING ALLEY POLISH

Buckingham Wax Corp.

Van Dam St. and Borden Ave.
Long Island City, N. Y.

Classified Advertising

Brings excellent results at a minimum cost. Rates are only 10c per word with a minimum charge of \$2 per issue (position wanted advertisements accepted at half rates). Whether you have some surplus equipment or material for sale, have a position open or are looking for a new connection, etc., use space in the Classified Section of *Soap & Sanitary*

★★★ *Chemicals*. It will place you in touch with the entire soap and sanitary products industry.

For Sale: 1 Bataille Extractor and accessories. Cost \$8,000. Priced reasonably. Address Box No. 793, care *Soap*.

Wanted for User: Soap chip dryer; filter press; foot and automatic soap press; crutcher; plodder; milling roll; dry powder mixers. What have you? Address Box No. 788, care of *Soap*.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Wanted: Second-hand fully equipped glycerine plant. Also second-hand soap drier without chilling rolls. Please give details, prices, etc. Quotations from machinery dealers not desired. Address Box No. 781, care *Soap*.

Factories Started—remodeled. Instruction in laundry and toilet soap processes and preparations; perfumes; glycerine recovery. Address English or Spanish, Box No. 785, care *Soap*.

For Sale: Proctor soap chip dryer with five chilling rolls; can be operated for inspection. Address Box No. 766, care *Soap*.



Does your "routed" copy of SOAP reach your desk a week or more late? A personal subscription will eliminate this annoyance. You will get your copy promptly. It will be yours. Start this month.

Annual Subscription:
\$3.00 Domestic
\$4.00 Foreign

LATE?

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New York, N. Y.

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Reg. U.S. Pat. Off.

THE PUMICE for

Powder

Paste

Bar

Mechanic type soap where an abrasive is desired.

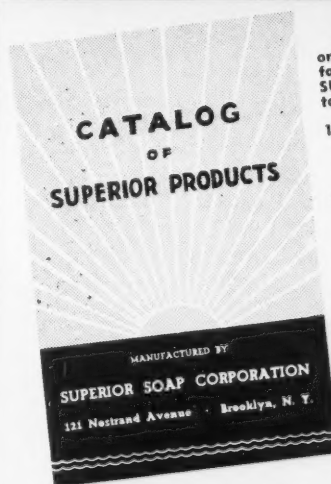
Write for samples and 12 page booklet of information

BARNSDALL TRIPOLI CORPORATION
PUMICE DIVISION

(Subsidiary Barnsdall Oil Co.)

SENECA, MISSOURI, U. S. A.

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1. SUPERIOR soap and sanitary chemicals meet every exacting requirement.
2. They are manufactured of the finest quality materials and constant uniformity is always maintained.
3. SUPERIOR'S prices are lowest.

The popularity of SUPERIOR Products is increasing daily. Join the swing to exactly what this age of speed demands — SUPERIOR Products.

FILL IN and MAIL COUPON AT ONCE

S-4

Please send me, without obligation, your new Catalog of SUPERIOR Products.

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Street LIBRARY
City MOSCOW State IDAHO

SUPERIOR SOAP CORPORATION

121 Nostrand Avenue • • Brooklyn, N. Y.

MADE EXPRESSLY FOR COMMERCIAL USE
DAN-DEE HEAVY DUTY



WAX

**EXTRA HEAVY
BODY
WATER RESISTING
SLIP RETARDING
DURABLE
PRIVATE LABELS
SUPPLIED**

Specially Priced for Drums,
½ Drums and 5 Gal. Cans

Full Details—Generous
Samples Available Upon
Request

TWIN CITY SHELLAC CO., Inc.
340 FLUSHING AVENUE BROOKLYN, N. Y.
Also Manufacturers of Liquid and Paste Wax

**A New Departure In
Crutcher Performance**

The HUBER ELECTRO PERFECTION CRUTCHER is now available in a new model,—with four forward and reverse speeds. The flexibility in operating technique afforded by this wider choice of crutcher speeds should be decidedly interesting to many soap makers. Available in three sizes,—1,500, 2400 and 3200 pounds.



HUBER MACHINE CO.
"Builders of Good Soap Machinery for the Past 45 Years"
265 46th STREET BROOKLYN, N. Y.

*Here's your
answer,
Mr. Anonymous:
Bobrick's No. 10*



Writing about the evils of sanitary supply selling in the March issue of SOAP, Mr. Anonymous said, "... here we find that vandalism, especially on the part of children, interferes with the purchase and installation of liquid soap dispensers. . ."

But they can't "vandalize" the No. 10. It locks to the wall, can only be removed with a special key, is therefore theft-proof; the lock top is hinged to the body so that it cannot be lost or stolen; there is no glass jar to break and cause possible injury; no loose parts to tamper with; the gleaming white porcelain-on-steel body is easy to keep clean.

Do you have our literature and prices?

Bobrick Manufacturing Corporation
15 East 26th Street New York, N. Y.

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send
for testing samples.*

PYLAM PRODUCTS CO., INC.
Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, on page 141 for page numbers. "Say you saw it in SOAP."

ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Ampion Corporation (Sanitary Supplies)
Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Floor Products)
Chemical Mfg. & Dist. Co. (Soaps and Sanitary Supplies)
Chemical Supply Co. (Disinfectants, etc.)
Chicago Sanitary Prods. Co. (Sanitary Supplies)
Clifton Chemical Co. (Sanitary Supplies)
Cole Chemical Corp. (Sanitary Supplies)
Davies-Young Soap Co. (Potash Soaps)
Federal Varnish Co. (Floor Products)
Fuld Bros. (Sanitary Supplies)
James Good, Inc. (Sanitary Supplies)
Harley Soap Co. (Soap Specialties)
Higley Chemical Co. (Floor Seal)
Hockwald Chemical Co. (Sanitary Supplies)
Hysan Products Co. (Sanitary Supplies)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
M. & H. Laboratories (Floor Waxes)
Onalim Co. (Shampoos)
Philadelphia Quartz Co. (Detergents)
Reilly Tar & Chem. Co. (Floor Seals)
Geo. A. Schmidt & Co. (Soaps)
Superior Soap Corp. (Soaps and Waxes)
Sweeping Compound Mfrs. Co. (Sweeping Compound)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Supplies)
T. F. Washburn Co. (Floor Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Chemical Mfg. & Dist. Co.
John A. Chew, Inc.
Columbia Alkali Co.
Cowles Detergent Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.

Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Reilly Tar & Chemical Corp.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Mirvale Chem. Co.
Monsanto Chemical Co.
Pittsburgh Coal Carbonization Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.
Tamms Silica Co.

CONTAINERS AND CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures and Bottles)
Continental Can Co. (Tin Cans)
Crown Can Co.
National Can Co. (Cans)
Owens-Illinois Glass Co. (Bottles and Closures)
Williams Sealing Corp. (Closures)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hysan Products Co.

INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Associated Chemists, Inc.
Rohm & Haas Co.
Whitmire Research Corp.

MACHINERY

Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Carbonating Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc.)
Stokes & Smith Co. (Pkg. Machy.)

CRESYLIC ACID

...

HIGH BOILING
TAR ACIDS

...

TAR ACID
CREOSOTE OIL

...

NAPHTHALENE

...

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MIRFIELD YORKS, ENG.

Say You Saw It in Soap!



THE average business house receives a great many inquiries for its products or services every year which cannot be attributed to any special source. A vast majority of these probably originate from some form of advertising but, due to the general tendency toward not mentioning the names of publications, cannot be directly traced.

When you write to anyone advertising in this publication, say you saw it in SOAP. The advertiser will appreciate it—and so will we!



The Publishers

CARNAUBA—

Direct Importers
of All Grades

•

ALSO

BEESWAX
HIGH MELTING-POINT
PETROLATUM
JAPAN WAX
And Other Waxes

**DISTRIBUTING AND TRADING
COMPANY, INC.**

21 WEST STREET

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Affiliated with LUZZATTO and FIGLIO. Est. 1867

Offices in

Paris, London, Antwerp, Milan, Zurich, Barcelona



*Host to most
WHO VISIT BALTIMORE*

LABEL OF THE TRAVEL-WISE

**THE LORD BALTIMORE
Hotel**
BALTIMORE, MARYLAND

Raw Material and Equipment Guide

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, page 141 for page numbers. "Say you saw it in SOAP."

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
Barnsdall Tripoli Co. (Pumice—Tripoli)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Lenape Trading Co. (Waxes)
Newport Industries, Inc. (Pine Oil and Rosin)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
Reilly Tar & Chem. Co. (Preservatives)
Tamms Silica Co. (Silica—Volcanic Ash)
Victoria Paper Mills Co. (Toilet Tissues)

OILS, FATS, AND FATTY ACIDS

T. G. Cooper & Co.
Eastern Industries
Emery Industries, Inc.
Independent Mfg. Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLOROBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
L. M. Chemical Co.

Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Rifa—New York, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Deodorized Insecticide Base, White Oils, Petroleum, Paraffine Oils, Residues, etc.)
Atlantic Refining Co.
Pennsylvania Refining Co.
L. Sonneborn Sons

PHOSPHATES

Trisodium, Sodium Pyrophosphate, etc.
American Cyanamid & Chemical Corp.
John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products
Associated Chemists, Inc.
Derris, Inc.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Whitmire Research Corp.

SILICATES

E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Ampion Corp.
Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.

SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Fumeral Co. (Spraying Systems)

WAXES AND GUMS

Carnauba, Shellac, Candelilla, etc.
American Cyanamid & Chem. Corp.
T. G. Cooper & Co.
Distributing & Trading Co.
Innis, Speiden & Co. (Waxes)
Lenape Trading Co.
The Mac Lac Co.
Mantrose Corp. (Shellac)
Twin City Shellac Co. (Shellac)

Waterproof FLOOR WAX

That has all the requirements necessary
to make it a product of unusual merit

- . . . water resistance
- . . . durability
- . . . non-slip
- . . . lustre

MORE PROFITS
due to lower cost

MORE SALES
due to higher quality

Inquiries Invited

M & H LABORATORIES

WAX DIVISION

2810 West Harrison St.

Chicago, Ill.

SPECIALTY SOAP PRODUCTS

Liquid Soap Base
Potash Oil Soap

Liquid Soap
U. S. P. Green Soap

U. S. P. Cresol Compound
Coal Tar Disinfectants

Pine Oil Disinfectants
Insecticides

Liquid Floor Wax

Auto Soaps
Shampoo
Pine Oil Soap
Shampoo Base

We manufacture for the trade only

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Ask for samples
of above specialty
bulk products.

F. & S.

Quality Colors
for

TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce
colors for all types of soaps.

If you have a shade you want matched
send us a sample. We have complete fa-
cilities for matching.

Liquid soap colors a specialty—send for
samples of F. & S. greens and ambers.

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NEW YORK, N. Y.

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Olive Oil

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ture in barrels, tank cars,
drums or tank wagons.

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Phone: WHitehall 3-9636-7-8

ITALY—SPAIN—GREECE—TURKEY—AFRICA

Professional Directory

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.

Research—Analyses—Tests

H. A. SEIL, Ph.D.

E. B. PUTT, Ph.C., B.Sc.

SEIL, PUTT & RUSBY, INC.

Analytical and Consulting Chemists

Specialists in the Analysis of Organic Insecticides, Pyrethrum Flowers, Derris Root, Barbaco, or Cube Root—
Their Concentrates and Finished Preparations

DRUGS — ESSENTIAL OILS — SOAP

16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.

Analytical and Consulting Chemists

Members Association of
Consulting Chemists and Chemical Engineers

130 Cedar Street

New York City

SOAPS — DETERGENTS

*Analyses Development
Consultation Formulas*

Hochstadter Laboratories

254 West 31st St.

New York City

KILLING

strength of Insecticides

by PEET GRADY METHOD

PYRETHRINS in PYRETHRUM FLOWERS

(by Gnadinger or Seil Method)

We raised and killed more than 1 million flies in the last 2 years

ILLINOIS CHEMICAL LABORATORIES, INC.

GRIDLEY, ILLINOIS

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Our staff of chemists, engineers and bacteriologists with laboratories for analysis, research, physical testing and bacteriology are prepared to render you

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Lancaster, Allwine & Rommel

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Contracting and Consulting Engineers

*Design and Construction of Equipment and Plants
for Producing and Processing Fats, Oils,
Soaps and Related Products*

136 LIBERTY STREET, NEW YORK, N. Y.

Cable Address: "ALPORTLE", New York

CONSULTANTS

offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

The New

1940 BLUE BOOK

to be mailed to subscribers to SOAP AND SANITARY CHEMICALS March 1, will carry the revised text of a whole series of official specifications and testing methods for soaps, insecticides, disinfectants, etc.

*The Blue Book is free with a
\$3.00 subscription to Soap*

MAC NAIR-DORLAND CO.

Publishers

254 W. 31st Street

New York, N. Y.

...1940 O. T. I. now ready.

SUPPLIES of 1940 Official Test Insecticide (O.T.I.) are now available for shipment from the office of the National Association of Insecticide & Disinfectant Manufacturers.

Stocks of 1939 O.T.I. on hand should be destroyed as they are no longer valid for testing by the official Peet-Grady Method of the Association.

Orders for 1940 O.T.I. now received at the Association office will be shipped promptly.



*National Association of
Insecticide & Disinfectant Manufacturers, Inc.*
110 East 42nd Street New York

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First Vice-President JOHN CURLETT, McCormick & Co., Baltimore
Second Vice-President H. A. NELSON, Chemical Supply Co., Cleveland
Treasurer JOHN POWELL, John Powell & Co., New York
Secretary IRA P. MACNAIR, MacNair-Dorland Co., N. Y.

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GORDON M. BAIRD

Baird & McGuire, Inc., Holbrook, Mass.

J. L. BRENNHuntington Labs., Inc., Huntington, Ind.

N. J. GOTHARDSinclair Refining Co., E. Chicago, Ind.

H. W. HAMILTONWhite Tar Co., Kearny, N. J.

DR. E. G. KLARMANN

Lehn & Fink, Inc., Bloomfield, N. J.

WALLACE THOMASGulf Refining Co., Pittsburgh

DR. E. G. THOMSENJ. R. Watkins Co., Winona, Minn.

CLARENCE WEIRICHC. B. Dolge Co., Westport, Conn.

R. H. YOUNGDavies-Young Soap Co., Dayton, O.

Index to Advertisers

For product classification see pages 135 and 137

*For further details see announcement in 1940, SOAP BLUE BOOK

*American-British Chemical Supplies.....	70	Karl Kiefer Machine Co.....	108
American Can Co.....	40	*Koppers Co.....	83
American Cyanamid & Chemical Corp.....	Mar.	Kranich Soap Co.....	54
American Standard Mfg. Co.....	132	L. M. Chemical Co.....	48
*Ampion Corp.....	8	Lancaster, Allwine & Rommel.....	139
Anchor-Hocking Glass Corp.....	6,7	*A. P. Lee.....	139
Aromatic Products, Inc.....	12	*Leghorn Trading Co.....	138
*Associated Chemists, Inc.....	Feb.	Lenape Trading Co.....	Mar.
Atlantic Refining Co.....	79	Lord Baltimore Hotel.....	136
*Baird & McGuire, Inc.....	90	M & H Laboratories.....	138
Barnsdall Tripoli Co.....	133	The Mac Lac Co.....	124
Barrett Co.....	48	Magnus, Mahee & Reynard, Inc.....	85
Bobrick Mfg. Co.....	134	Mantrose Corp.....	126
*Breuer Electric Mfg. Co.....	124	Manufacturing Chemist.....	Mar.
Buckingham Wax Corp.....	132	*McCormick & Co.....	78
*Candy & Co.....	106	McLaughlin Gormley King Co.....	4th Cover
*Chemical Mfg. & Dist. Co.....	114	Mirvale Chem. Co.....	136
Chemical Supply Co.....	116	*Mixing Equipment Co.....	Feb.
John A. Chew, Inc.....	Mar.	Monsanto Chemical Corp.....	Jan.
Chicago Sanitary Prods. Co.....	126	*National Can Co.....	84
*Clifton Chemical Corp.....	15	*Newman Tallow & Soap Machinery Co.....	128
*Cole Chemical Corp.....	131	Newport Industries, Inc.....	52
*Columbia Alkali Co.....	4	*Niagara Alkali Co.....	112
Compagnie Parento.....	130	Norda Essential Oil & Chemical Co.....	88
*Consolidated Products Co.....	129	*Onalim Co.....	Feb.
*Continental Can Co.....	Dec.	*Orbis Products Co.....	19
T. G. Cooper & Co.....	Mar.	Owens-Illinois Glass Co.....	13
Cowles Detergent Co.....	Mar.	*S. B. Penick & Co.....	73
Crown Can Co.....	89	*Pennsylvania Refining Co.....	118
*Davies-Young Soap Co.....	11	Philadelphia Quartz Co.....	62
*Derris, Inc.....	130	*Pittsburgh Coal Carbonization Co.....	126
Diamond Alkali Co.....	58	*John Powell & Co.....	74,75
Distributing & Trading Co.....	136	R. J. Prentiss & Co.....	81
*Dodge & Olecott Co.....	56,104	*Proctor & Schwartz, Inc.....	70
*Dow Chemical Co.....	Mar.	*Pylam Products Co.....	134
P. R. Dreyer Inc.....	52	*Reilly Tar & Chemical Co.....	122
*E. I. DuPont de Nemours Co.....	86	Rifa—New York, Inc.....	54
*Eastern Industries.....	Mar.	*Rohm & Haas Co.....	100
*Electro Bleaching Gas Co.....	112	*C. G. Sargent's Sons Corp.....	Mar.
Emery Industries, Inc.....	Feb.	George A. Schmidt & Co.....	Mar.
*Federal Varnish Co.....	118	Seil, Putt & Rusby.....	139
*Felton Chemical Co.....	9,81	Shell Oil Co.....	114
Fezandic & Sperrle.....	138	*Skinner & Sherman.....	139
Filtrol Corp.....	Mar.	*Foster D. Snell.....	139
*Firmenich & Co.....	Mar.	*Solvay Sales Corp.....	2nd Cover
Anthony J. Fries.....	Mar.	*L. Sonneborn Sons.....	Mar.
*Fritzsche Brothers, Inc.....	44,45	Sprout, Waldron & Co.....	Mar.
*Fuld Brothers.....	3	Standard Silicate Co.....	58
Fumeral Co.....	120	Stillwell & Gladding.....	139
Garnet Chem. Corp.....	Mar.	*Stokes & Smith Co.....	68
*General Chemical Co.....	Mar.	*Superior Soap Co.....	133
*General Drug Co.....	14	Sweeping Compound Mfg. Co.....	Mar.
*Givaudan-Delawanna, Inc.....	Front Cover, 87	Tamms Silica Co.....	Mar.
James Good, Inc.....	132	*Tar & Chem. Division Koppers Co.....	83
Harley Soap Co.....	138	Jos. Turner & Co.....	36
Hercules Powder Co.....	82	Twin City Shellac Co.....	134
Higley Chemical Co.....	120	*Uncle Sam Chemical Co.....	Mar.
*Hochstadter Laboratories.....	139	Ungerer & Co.....	3rd Cover
Hockwald Chemical Co.....	130	*Van Ameringen-Haebler, Inc.....	17,102
*Hooker Electrochemical Co.....	Mar.	*Albert Verley, Inc.....	66
*Houchin Machinery Co.....	64	*Victor Chemical Works.....	18
Huber Machine Co.....	134	Victoria Paper Mills Co.....	Mar.
*Hysan Products Co.....	46	*Warner Chemical Co.....	10
Illinois Chemical Labs.....	139	*T. F. Washburn Co.....	122
Independent Mfg. Co.....	131	Wecoline Products Co.....	129
*Industrial Chemical Sales Division		*Welch, Holme & Clark Co.....	56
W. Va. Pulp & Paper Co.....	16	*White Tar Co. of N. J.....	83
*Imis-Speiden & Co.....	50	Whitmire Research Corp.....	98
Interstate Color Co.....	Mar.	Williams Sealing Corp.....	50
R. A. Jones & Co.....	20	Windsor Wax Co.....	Feb.

Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.



...always out!

DO YOUR salesmen worry because so many buyers are always "out" to them . . . especially new prospects? Nothing is more damaging to a salesman's morale . . . and his sales too. It's a cinch that he can't sell if he can't get in!

Make your firm and your products better known to the buyer *in advance* of your salesman's calls . . . help your salesman to get in to see the buyer . . . by the regular use of advertising space in representative trade publications.

Specifically, if it's in the field of soap products, insecticides, disinfectants, sanitary products, and allied chemical specialties where you want to make your firm and products better known, we suggest regular advertising in . . .

SOAP and Sanitary Chemicals
254 WEST 31st STREET NEW YORK

Member of the A.B.C.

Tale Ends

INQUIRES a newspaper writer recently in his column: "What ever became of the Gold Dust Twins?" With heavy heart, we must tell him that our two little pals were about two years ago sold down the river by their old pappy. Temporary seclusion or have they walked the plank? We can't say, because those who know will not tell. * * *

Soap will kill germs, says a professor on the West Coast. What germs? What soaps? And why do some manufacturers go to all the trouble of adding mercury iodide, and other things to "germicidal" soap? Evidently a whim. * * *

The big fly and bug season is just around the corner. And this is the time of year when insecticide manufacturers say their annual prayers for a warm, wet spring, meaning plenty of bugs later on. * * *

Proposed revisions in the Insecticide Act of 1910 requiring phenol coefficient statements on all disinfectant labels, and other stiffening of the law, are not likely of adoption at the present session of Congress, says a grapevine report from Washington. * * *

In buying toilet soap, Chicago housewives choose their soap first on a basis of purity, says a college professor. Other considerations are odor, lather, and quality. None was recorded as choosing a soap because they got a lot for their money. So, Mr. Soaper, don't forget that in Chicago, it's purity and not price! * * *

The new 1940 "Blue Book" has been mailed to all paid subscribers to *Soap & Sanitary Chemicals*. Did you get your copy? If not, check up with us on the status of your subscription,—or if you are holding a subscription bill, rush in your check so that we can mail your copy at once.

PROBLEMS



1940 is opening a new decade of problems for all soap makers. Severe competition has always existed in the sale and distribution of your finished goods. But today in addition, hectic competition exists in production, in the mad scramble for quality raw materials.

Ungerer perfuming materials are a tremendous aid in solving your SALES PROBLEM. And happily,

we can be of equal service in the solution of one of your major PRODUCTION PROBLEMS—securing quality raw materials for the perfuming of your soaps.

If you will welcome aid in your perfuming problems may we suggest a very easy formula—

"CALL IN UNGERER"

U N G E R E R & C O .

13-15 WEST 20th ST., NEW YORK, N. Y.

**IT'S THE FLIES
IN THE
DUST PAN**



...THAT REALLY COUNT

Knock 'em down and sweep 'em out. That's the way housewives expect an insecticide to act. Kill at the end of 24 hours or 48 hours doesn't mean a thing to your customers. It's the number they sweep into the dust pan that counts.

Some synthetic active principles make a good record as to kill at the end of 24 or 48 hours when tested by the Peet Grady method. But how about the actual number of flies you can sweep up at the end of ten minutes? That's how your customers will judge your insecticide.

If you are using the Peet Grady method, then you know that flies knocked down at the end of 10 minutes by some combination synthetic sprays are often so lively that it is not only hard to pick them up, but it is practically impossible to sweep them up. Your housewife customers won't repeat

on that kind of performance. They demand knock down and *knock out*.

You can be sure that your finished product will get a high percentage of knock-down and knock-out by using Pyrocide 20. It is the purest form of pyrethrins commercially available. The process used in manufacturing Pyrocide 20 removes "false" pyrethrins. Pyrocide 20 is guaranteed to contain 2.5% pyrethrins by weight equivalent to 2.0 grams pyrethrins per 100 cc. During the manufacturing of Pyrocide 20 we make three comprehensive analyses to establish pyrethrin content. The last analysis takes place just before shipment to you.

MCLAUGHLIN
GORMLEY KING CO.
Minneapolis, Minn.

PYROCID

THE PUREST FORM OF PYRETHRINS COMMERCIALY AVAILABLE

20

